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ABSTRACT

The pamphlet focuses on the geography and industry of the Netherlands. Information, presented in expository, tabular, and photographic form, is arranged in four major sections. Section one discusses industry: its development since the 17th century, regional distribution of modern industry throughout the country, and case studies of several important business enterprises. Emphasis is placed on the country's lack of raw materials and its favorable geographic situation for importing. Section two describes the regional structure of the country and provides statistics by region on area and land use, population, agriculture, industry, and internal trade. Section three, entitled "Brief Notes," surveys problems of automobile traffic, delta works, urbanization, and environment. Section four describes the aims and activities of the Information and Documentation Centre for the Geography of the Netherlands. (AV)

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INFORMATION AND DOCUMENTATION CENTRE FOR THE GEOGRAPHY OF THE NETHERLANDS

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FOREWORD

The present issue of the I.D.G. Bulletin, for 1976 - 77, is the fourth in the series of this annual publication.

A questionnaire was attached to a number of copies of the Bulletin which appeared in 1976. As a way of thanking the many people who took the trouble to complete and return the form, we have tried in this issue to meet those wishes which occurred most frequently.

In response to the favourable reaction, we have maintained the division into chapters, which was employed last year for the first time.
The theme of Industrialisation was the subject most requested for the leading article and this wish has naturally been acceded to in the present Bulletin. In the other chapters, too, heed has been paid to frequently stated wishes.

The I.D.G. hopes that, in this way, it has again performed a useful service for the many people concerned with the geography of the Netherlands, whether through study, teaching or the provision of information.

Further information or documentation is obtainable at all times from a Dutch embassy or consulate, or from the I.D.G. in Utrecht.

Utrecht, 1977.
Heidelberglaan 2.

Drs. H. Meijer,
Manager of the Bureau
of the I.D.G.

Text concluded on 1st May 1977.

I – INDUSTRY IN THE NETHERLANDS *

The need has appeared from various sources, including the questionnaire sent to a number of readers of the I.D.G. Bulletin for 1975 - 76, for information to be given in a following number of the Bulletin about industry in the Netherlands.

The I.D.G. is pleased to accede these requests. The picture of the Netherlands held by many foreigners may have evolved from "clogs-windmills and tulips" to "dikes-canals and polders", but a description of it as a country of modern services and industry is still too seldom encountered, for example, in foreign school textbooks.

We have answered the question of how to treat such a comprehensive subject in this Bulletin by taking as a starting-point the needs of the authors and users of school geography books. A purely descriptive inventory of the industries of other countries, arranged, for example, by class of industry or region, will no longer be presented in a modern geography syllabus. Rather will the industry of a country be treated in a particular context, from a particular point of view (perhaps related to the educational objectives), in the form of examples associated with a given theme. A much used form is the case-study of one or a number of well-known enterprises.

Three approaches will be employed in the present article:

1. – The development of industry in the Netherlands, with special reference to the question: " how does industry develop in a country where the majority of raw materials are lacking, but which has a relatively favourable geographical situation?" (p. 5);
2. – the distribution of industry over the country, with special reference to the effect of "geographical" and "artificial" locational factors (p. 10);
3. – short case-studies of a limited number of the most important enterprises (p. 16).

1. Development

At the time of the first industrial revolution the Netherlands was still primarily an agricultural country (see the figures below of the division of the employed population). Industrial development began in the 20th century, but it was seriously impeded in its early stages by two world wars and the intervening depression. Consequently, large-scale industrialisation did not begin until after 1945.

		Percentages	
Employed Population	**1850**	**1930**	**1975**
Agriculture, fishing	44	21	6
Mining and Manufacturing	30	38	34
Other employment	26	41	56
Unemployed			4
Total population (millions)	3,1	8,8	13,6

The main outline of industrial development described above is generally known, but many people at home and abroad appear to be less aware of the industrial importance of the Netherlands in the centuries preceding the steam engine.

Before 1850

The high point of this phase was the 17th century ("Golden Age"). Fishery and foreign trade had already been flourishing in many places on the coast since the end of the Middle Ages. The import of raw materials from foreign countries had led to the rise of processing industries, the end-products of which were usually re-exported (the so-called "traffic" industries). The western coastal provinces ("Holland") consequently became the most important

* The author of this account has made extensive use of the following sources, among others:
– Jansen, A.C.M., and M. de Smidt – Industrie en ruimte (Van Gorcum, Assen, 1974).
– Buisman, J. – Nederland, zoals het was, zoals het is (Sesam; Bosch en Keuning, Baarn, 1975).

region of industrial concentration. A well-know example is the district along the River Zaan, N.W. of Amsterdam *, where Czar Peter the Great came to learn the trade of shipbuilding in 1697.

From about 1600 power for industry was here supplied by the wind. In addition to the thousands of windmills formerly used to pump the low-lying part of the Netherlands dry, there were countless "industrial" mills. At the beginning of the 18th century, for example, there were some 250 windmills in the Zaan district just for sawing timber alone. The timber was imported from Scandinavia and Russia etc. and some of it re-exported to those countries after being sawn into planks.
Other windmills were used for grinding wheat, barley, rice and cocoa beans, for pressing oil from linseed, processing rags into raw material for paper and grinding dye-wood (combined with linseed oil to make paint).

This district had long had an important ship building industry, with associated sawmills, sail factories and rope-works. The ships were used, among other things, for whaling, which led to the building of try houses (the whale oil was used in lamps and for the manufacture of soap and candles).
People even seemed to be already aware of environmental problems, as shown by the regulation that try houses and other obnoxious industries had to be built outside the villages.

The old glory of the Zaan district survives in two forms today. There is the "Zaanse Schans" open air museum, where old timber Zaan houses and industrial windmills have been assembled (photograph I), and there is the extensive present-day industry, which is partly directly derived from the historical situation described above, for example, the food and wood-working industries (photograhp II).

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* All topographical references in this article can be found on fig. 1, p. 11.

Photo I — River Zaan; on the opposite bank the "Zaanse Schans" open air museum.

Photo II – The Zaan district, looking N.; in the foreground, left of the railway, the Bruynzeel woodworking factory. On the island in the Zaan a timberyard and, close to the locks complex lying immediately behind, the centre of Zaandam (Zaanstad municipality).

Between 1850 and 1950

At first there was little to be noticed in the Netherlands of the stormy growth to which the steam engine gave rise in such countries as Britain and Germany. Steam did open up new possibilities for existing industries, such as the textile industry in Twente, but for the moment these was no sign of the growth in the metal industry which was so important in other countries. One important reason for this was the absence of basic minerals. Iron ore does not occur in the Netherlands and coal was not yet mined at that time. An exception was the south of what is now Belgium, which until 1830 formed part of the Kingdom of the Netherlands and where coal mining and industry did develop. Even after the separation of Belgium, however, the Netherlands did not make great efforts to obtain much new industry within its frontiers. An explanation is to be found in the following economic premise: the Netherlands was able to import the manufactures it required from all the surrounding countries in exchange for agricultural exports. This attitude stemmed directly from the traditional importance of the Netherlands as a *trading* nation. This was also the reason why, at that time, the Dutch preferred to invest their money in the tropical plantations in the colonies rather than in the development of mines, railways and industries in their own country.

Towards the turn of the century ideas began to change – for various reasons.
The population was growing rapidly and agriculture no longer afforded sufficient employment. In addition it became increasingly difficult to maintain the balance of trade, while the economy became increasingly dependent on other countries. The unfavourable effects of the latter became particularly apparent during the First World War, which was a period of stagnating foreign trade. During the course of the 19th century a considerable amount of industry had already developed as a result of private enterprise, particularly in the metal and textile sectors, but after 1900 there was an acceleration, accompanied by a more active involvement on the part of government.
After the opening of the first coal mines in South Limburg in the last decade of the 19th century, with the aid of private (mostly foreign) capital, four mines were sunk by the state between 1906 and 1925. The first three decades of the 20th century also saw the beginning of the exploitation of rock salt in Twente and of marl in South Limburg.

In 1917 the decision was taken to establish a Dutch iron and steel plant. The Netherlands also shared in the rise of "modern" branches of industry, such as electronics (Philips).

As has already been said, the world economic depression of the 1930s and the destruction and broken trading links of the Second World War signified the provisional end of these developments.

Nor were the prospects after 1945 immediately favourable. Factories and the transport infrastructure lay in ruins, not only in the Netherlands, but in its main market of Germany. A few years after the war the Netherlands also had to cope with the loss of the Netherlands East Indies, now Indonesia.
Thanks to great efforts by the population and help from outside (the Marshall Plan), however, reconstruction proceeded very favourably and, by 1950, the pre-war level was reached again or exceeded in many sectors.

After 1950

Although industrial production had recovered by about 1950, as fas as volume is concerned, the structure of Dutch industry remained simple in character. This is to say that in many factories there was a relatively simple production process, such as the working up of local or foreign mineral or agricultural raw materials into semi-manufactures or food products, processes which required relatively large numbers of workers, most of whom were semi or unskilled. Among the important branches of industry were food, drink and tobacco, clothing and footwear etc.
Since 1950, however, there has been a rapid enhancement of level in a few decades.

Photo III — Traditional, labour-intensive industry: painting pottery in "De Porceleyne Fles" factory at Delft.

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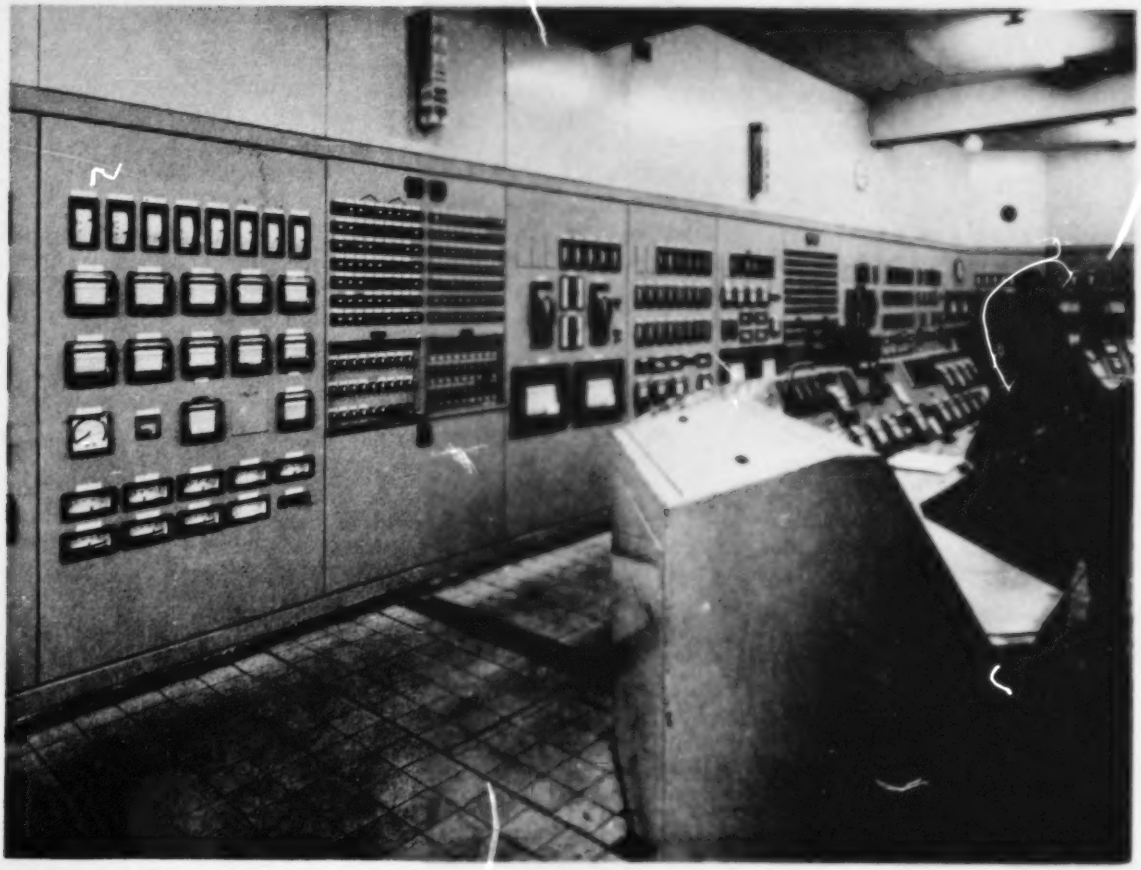


Photo IV — Modern, automated industry: control room of the DSM chemical works at Geleen.

The following are some indices of this development:

- the emergence of new branches of industry, with particularly the tempestuous growth of the petro-chemical industry.
- an initially relative and, later, absolute decrease in the labour force, generously compensated by a very great increase in labour productivity: by an average of 4.5 % per annum from 1953 - 63, and by as much as 8 % per annum from 1963 - 68 (see photographs III and IV).
- a strong spatial concentration in the coastal provinces and the large urban agglomerations of the western Netherlands (in spite of the efforts of the government to achieve a more even distribution over the country; on this aspect see also p. 14 et seq.).
- important foreign investments in the Netherlands.

The favourable development described above continued until 1965. The unfavourable raw material and fuel situation now scarcely any longer formed an impediment. After the vast natural gas discoveries round about 1960 the energy situation rapidly improved and raw materials and fuels were imported on a large scale — hence the concentration in the coastal areas. Moreover, the industries which began to develop now were mainly those for which the availability of a highly developed labour force and consumers' market forms a far more important location factor than the presence of large mineral reserves.

After 1965, however, increasingly dark clouds began to gather above the industrial horizon:

- the fact that increasingly fewer people could produce a constantly growing volume of goods began to exercise an unfavourable influence on the employment situation — a development to which a densely populated country like the Netherlands is particularly sensitive.
- turnover began to be adversely affected by signs of saturation in the home and foreign markets; the problems of finding a market were aggravated by the rapid increase in wages, which at first after the war had been kept under control by the government in order to maintain the country's competitiveness.

- increasing competition from countries with a lower level of wages, encouraged in the European context by the achievement of economic integration: Benelux and E.E.C.
- the growing realisation that the rapid economic development also had its drawbacks, for example, in contributing to the diminishing reserves of raw materials in the world and to the destruction of the natural environment.
- regional problems, as in the northern provinces (retarded economic development), Twente and other textile districts (competition from cheap foreign imports and from artificial fibres) and South Limburg (closing of all coal mines between 1966 and 1975).

Attemps are being made to improve the difficult situation by means of such measures as mergers and the closing of unremunerative enterprises. In general, the problem is considered to be more a structural one than a temporary phase of the economic cycle, which makes the prospects all the more sombre for the unemployed, who are now more numerous (ca. 200,000 in March 1977) than in any year since the war.

2. Regional distribution: locational factors and government intervention

Two aspects are discussed in this section: first, a very general review of how a particular spatial pattern of industrial distribution came about "naturally" during the course of time. Secondly, the measures are discussed by which the government has tried, where necessary, during the past 20 years to modify this spatial pattern, thus influencing the distribution of employment and consequently of population.

a – the "natural" pattern

As has already been said, the favourable water communications of the western coastal provinces were an important historical factor in the establishment of industry in the Netherlands. We have already referred to the developments in the Zaan district. Comparable developments occurred in earlier centuries in other old Dutch towns, such as Dordrecht, Leiden, Haarlem, Amsterdam, Delft, Gouda and Rotterdam.

Western Netherlands

The industrialisation after 1900 largely built upon this pattern, except that, as ships became larger, concentration took place in the most accessible port areas.
After the cutting of the New Waterway in 1872 and the North Sea Canal in 1876, to give Rotterdam and Amsterdam, respectively, a direct connection with the sea, these two cities and their environs increasingly gave the lead. The clearest examples of this development are the blast furnaces and related concerns, for which the basis was laid in the 1920s at the entrance to the North Sea Canal (IJmuiden), and the petrochemical industry along the New Waterway, where the first oil refinery was built just before the Second World War.

After the war there was a "rush to the coast" of basic industry in Western Europe in general. Steel works were built increasingly on the coast, even in countries with their own supplies of coal and iron ore. Coastal locations have always been preferred for oil refineries and this is becoming increasingly true of other basic industries, such as aluminium smelters.

In addition, industries in general are beginning to gravitate mainly towards concentrations of highly skilled labour, towards large markets and already existing industries, with the result that they attract each other as though in a chain-reaction ("agglomeration effect").
In both of these instances, the western Netherlands, with its good harbours and large population concentrations offers excellent possibilities. Apart from the traditional areas around Rotterdam and Amsterdam, the neighbourhood of the Western Scheldt in the province of Zeeland, in particular, has become important in this regard (new port and industrial sites near Flushing and Terneuzen).
The foreign investments, which played an important part in the industrialisation of the Netherlands after the war, also largely find their way to the regions just described.

The Remainder of the Netherlands

It should not be concluded from the above that industrialisation was of no account in the remainder of the Netherlands before the intervention of the government.
Two main types of industry can be distinguished from the point of view of locational factors. These are: industry orientated towards cheap labour, as it formerly existed; and industry orientated towards the local occurrence of raw materials or fuel supplies.

fig. 1 — Towns, rivers and canals referred to in the article about industry in the Netherlands.

A *cheap labour market* that was attractive to industrial entrepreneurs was to be found in the last century particularly on the sandlands of the eastern and southern Netherlands. The peasants on the small agricultural holdings led a marginal existence and there was great unemployment, concealed or otherwise. Many people tried to supplement their meagre earnings by means of domestic industry, such as spinning, weaving, cigar making etc. With the economies of scale brought about by the industrial revolution it was natural that these industries should be organised more on factory lines. The textile industry, for example, began to flourish in areas like Twente (Enschede, Almelo) and North Brabant (Tilburg, 's-Hertogenbosch, Eindhoven, Helmond), where the cigar industry also prospered.

To some extent there was here a process of "locational shift", since the industries concerned were originally located mainly in the western coastal provinces, orientated towards the import of raw materials. During the course of the 19th century, as inland communications improved, it became attractive to relocate these industries on the "cheap" sandlands.

As far as the industries based on the *presence of raw materials or fuel supplies* are concerned, a distinction can be made between mineral and agricultural products.

In the first category may be mentioned such underground minerals as coal, petroleum, natural gas and rock salt, and surface minerals such as peat, marl, gravel, sand and clay.

Coal mining in South Limburg, particularly of steam-coal, from which coke could be produced, gave rise to a highly diverse chemical industry. The coke-oven gas was the source of numerous products, such as the raw materials for artificial fibres and plastics, as well as fertilisers, pharmaceutical products, dye-stuffs etc. The chemical plants, which have been operating since 1967 under the collective name of DSM (Dutch State Mines, Geleen), have gone over to the use of petroleum and natural gas as fuel and raw materials after the closing of the coal mines. Both products are transported by pipeline, the oil from the port of Rotterdam and the gas from the northern Netherlands.

The closing of the coal mines, completed in rapid tempo between 1966 and 1975, was mainly the consequence of the discovery of vast reserves of *natural gas* under the northern Netherlands in the early 1960s. Coal quickly had to abandon the competition with natural gas and with cheaper coal from abroad, mainly because of the higher production costs (the coal seams are thin and at great depth and wages are high) and the dearer cost of transport.

Energy consumption	1965			1970			1975		
	10^{12} kcal	10^{9} therms	%	10^{12} kcal	10^{9} therms	%	10^{12} kcal	10^{9} therms	%
coal	94	3730	32	48	1905	10	24	952	4
natural gas	14	555	5	169	6706	35	351	1393	60
petroleum	187	7421	63	261	10357	55	203	8056	34
nuclear power	0	0	0	0	0	0	11	437	2
Total	296	11746	100	478	18135	100	589	23373	100

Source: Statistisch Zakboek, CBS, 1976

The conversion was radical in many respects, involving the conversion of equipment, both in homes and business, the transport of gas by pipeline instead of coal transport by ship and train etc. It is noteworthy, however, that none of this had any effect on the pattern of industrial distribution in the Netherlands. The chemical industry fortunately remained in South Limburg, while the exploitation of gas, which was simple to transport, had little positive effect on the industrialisation of the North. A not unimportant exception is an aluminium smelter in Delfzijl, which uses energy supplied by natural gas to process into aluminium bauxite imported from Surinam.

Petroleum is exploited in south-east Drenthe (Schoonebeek) and in the province of South Holland in the region of The Hague and Rotterdam. The exploitation of petroleum in the Netherlands has never had any effect on the location of the refining industry. The country imported in 1975 more than 40 times its home petroleum production, which was incidentally considerably less than before the energy crisis of 1973, and inland production provides for no more than about 7 % of home consumption. These figures make it clear that the decisive factor has been the possibilities for import and export to and from other countries. Refining, therefore, takes place exclusively in the coastal provinces. Home exploitation of petroleum has declined by about one third since 1965.

The exploitation of *rock salt* increased by about 50% between 1965 and 1975 (2,700 million tonnes in 1975). Important processing industries have grown up in or near the two areas of occurrence: production of salt mainly for domestic use and the roads in Hengelo and a chemical industry based on salt (including soda and chlorine) at Delfzijl. The salt used at Delfzijl is transported as brine by pipeline from Winschoten, 20 kilometres to the south.

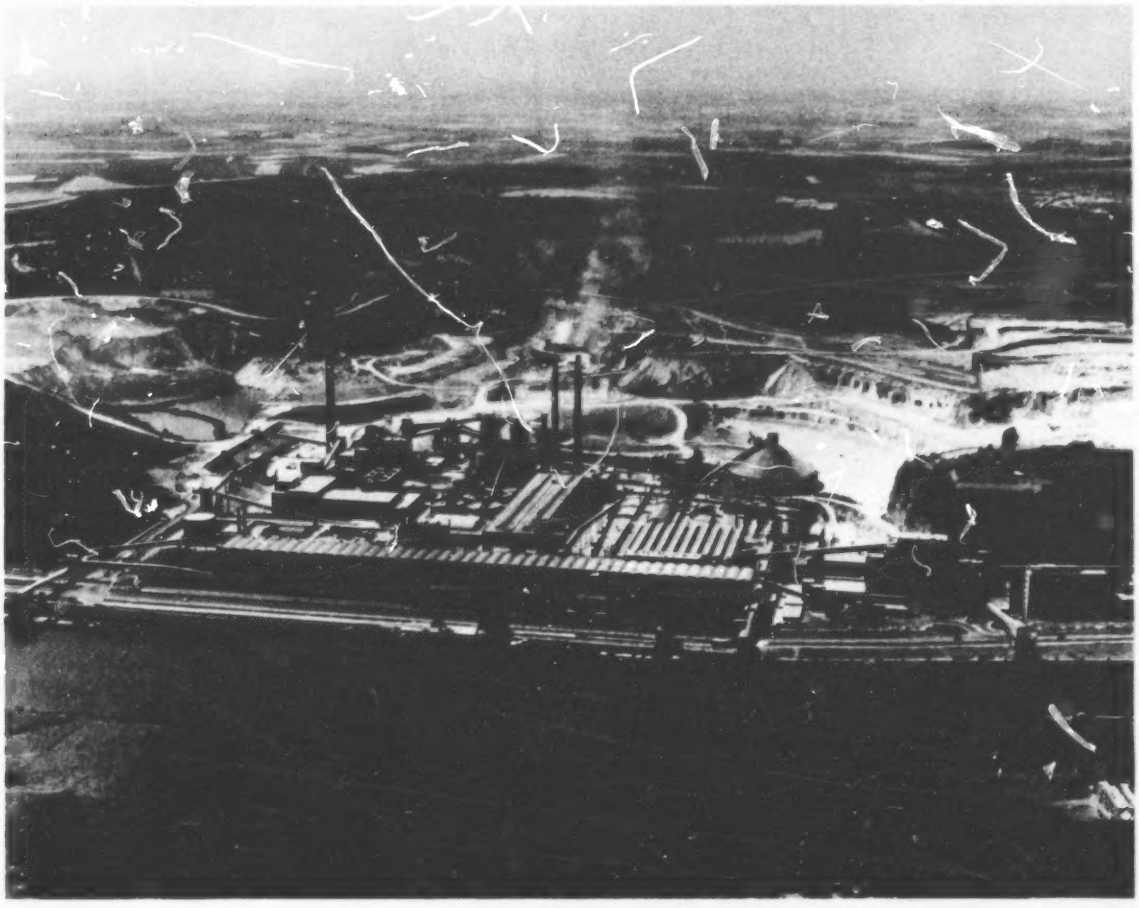


Photo V – ENCI cement works, S. of Maastricht, looking W. In the foreground the River Meuse, behind the works the St. Pietersberg, which has largely been quarried away. After marl quarrying has ceased, the site will be laid out for recreational use.

Among the *surface minerals* it is mainly the sources of building materials that are important for industry. *Marl,* quarried in the extreme south of Limburg gave rise to the production there of cement (ENCI, see photograph V) and to the manufacture of calcareous fertilisers. Another well-known industry is the manufacture of bricks and roofing tiles, for which *clay* is the raw material. This industry is located mainly in the region of the great rivers and in the west of the province of North Brabant.

The *processing of agricultural products* is much more widely dispersed over the country. It is understandable, for example, that, in view of the great importance of dairy farming almost throughout the Netherlands, creameries are to be found in all parts of the country. For the rest, the distribution of agriculturally-based industries corresponds in broad outline with the regional variations in the types of farming, which are related predominantly to natural factors (see, *inter alia,* IDG Bulletin 1975 - 76, pp. 10 and 11). The meat-processing industry, for example, is located mainly in the "High Netherlands", where large numbers of animals for slaughter are grazed on the sandlands (Oss, Deventer etc.). The arable farming in the areas of marine clay (north and south-west Netherlands) formed the basis for the building of sugar factories etc. in Groningen and Dinteloord. The fruit-growing on the levees of the region of the great rivers gave rise to the prosperous canning industry there (Tiel). The cultivation of industrial potatoes on the "dal" soils of the former peat colonies in the south-east of the province of Groningen led to the manufacture of potato flour, from which an extensive chemical industry gradually developed (Veendam).

These are a few examples. It is neither possible nor desirable to give a complete summary.

SI 13

We may note that the establishment of industry has certainly not remained limited to the coastal districts. The figures below show that, viewed nationally, industrial employment has its centre of gravity not only in the coastal provinces, but also, for example, in Gelderland and North Brabant, while in the latter and other provinces, often a greater percentage of the occupied population is employed in manufacturing than in the western coastal provinces.

	(a) population	(b) no. of persons employed in manufacturing	(c) no. of persons employed in manufacturing	
	as %of national total 1970		as %of occupied population per province	
			1970	1973
Groningen	4	4	39	42
Friesland	4	3	35	44
Drenthe	3	3	40	47
Overijssel	7	9	46	47
Gelderland	12	12	43	42
Utrecht	6	5	34	33
N. Holland	17	15	37	33
S. Holland	23	19	37	34
Zeeland	2	2	31	40
N. Brabant	14	20	50	49
Limburg	8	9	48	49
Netherlands	100	100	40	40

Source: CBS (a,b), E.E.C. Statistics (c).

Another picture emerges, however, when volume and value of production are used as a measure. Then, the western coastal provinces of North and South Holland feature much more prominently. This is the result of a development which occurred mainly during the 1960s. "Growth" industries, such as the metal manufacturing and chemical industries, with a high and constantly increasing labour productivity, continue to expand in the west, while, in other parts of the country, the more traditional branches of industry, such as food manufacture and textiles, have to contend increasingly with the structural problem described earlier – i.e. inability to compete because of the rising level of wages (these are mainly labour-intensive enterprises) and increasing competition from other countries and products. Efforts are being made to solve the problems by such measures as a far-reaching concentration: by aiming at a smaller number of concerns of a larger average size, labour productivity can be increased. The number of creameries, for example, was reduced from 389 to 147 between 1963 and 1974, and the number of brickworks from 211 in 1966 to 139 in 1974.

In consequence, there are tensions in all parts of the country. In the west the labour shortage has to be made good by the immigration of large numbers of foreign workers from the Mediterranean countries, while in the rest of the Netherlands unemployment is increasing by leaps and bounds, further augmented by the continuing shedding of labour from agriculture. Nor does absorption in the growing services sector provide anywhere near as much relief in these regions as it does in the west.

b – Government intervention

Reading the last few paragraphs above might easily lead one to conclude that the problems could be quickly solved by transferring the labour surplus from the remainder of the Netherlands to the west. The government did indeed try to encourage this trend during the 1950s by making removal grants etc., but there soon proved to be great disadvantages in this. In the expulsion areas a selection took place – the people who left were mainly the young, enterprising ones – and the level of facilities dropped still further. Moreover, the rapid increase of population in the west led to problems of spatial over-population (with reference to these migration flows see, *inter alia*, the maps on p. 9 of the 1974 issue of the IDG Bulletin).

For this reason a different policy was followed from 1958. In four "problem regions" situated in the "corners" of the country (see fig. 2) an attempt was made to create new jobs by means of subsidies to firms and trough general measures, such as improvement of the infrastructure, new housing etc. In this way it was also hoped to relieve the increasing pressure on the west at the same time.

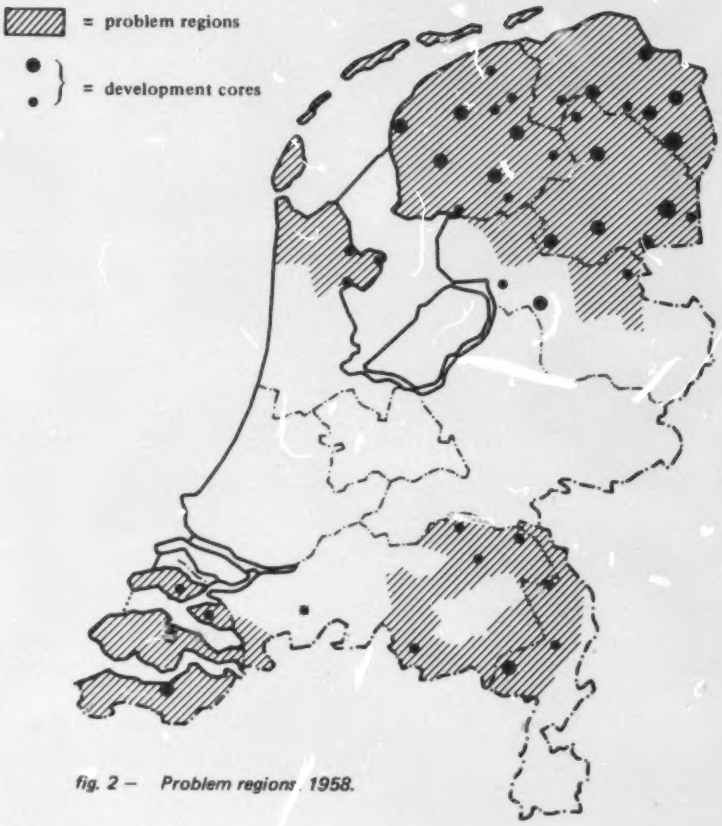


fig. 2 – Problem regions 1958.

More than ten years later the situation proved to have changed greatly in a number of respects. The economic boom of the 1960s was over and the labour-intensive enterprises in the marginal provinces, some of them new, proved to be the first to have to deal with the repercussions of this. In addition, South Limburg had got into difficulties because of the rapid closing of the coal mines. On the other hand, the situation in Zeeland, for example, had considerably improved, partly because of the completion of the Delta dams and bridges and the industrialisation along the Western Scheldt, while in parts of North and South Holland the congestion phenomena had grown more serious, causing traffic and environmental problems.

With a few interruptions, therefore, the government measures since 1973 relating to the distributuin of economic activity have been directed at the following areas:

- the three northern provinces ("stimulation area"), which still lag behind the rest of the Netherlands as far as employment structure, urbanisation, infrastructure and level of the labour market are concerned. To remedy this and bearing in mind the results achieved by government policies so far, the establishment must be encouraged particularly of "high value" capital intensive, enterprises, which will contribute to the creation of a structure that is more sound economically and less sensitive to the economic cycle.
- South Limburg ("restructuring region"), where the problems just described generally do not apply, but where a greater industrial diversity must be created after the closing of the mines.
- The West Holland Conurbation (Randstad – "restraint region"), where industrialisation could be held in check by such means as the occasional levying of additional taxation on investments or the strict imposition of a licensing policy.
  This tripartite division also occurs in the government report "concerning regional socio-economic policy 1977 - 1980" published in February 1977. The regional policy is to be intensified in response to the bad economic situation and its greatly varying regional impact.

The map (fig. 3) shows some changes relative to the earlier measures:

- the area to which the Selective Investment Scheme applies has been extended to include the Veluwe (the restraint measures are incidentally being applied hardly or not at all at present);
- a number of centres have been designated for subsidy outside the existing stimulation regions, including Overijssel (Twente), Gelderland and eastern North Brabant. They are mainly towns which are suffering from the effects of the crisis in the textile industry.

In recent years the services sector had also come to be increasingly involved in the redistribution measures, which is a logical consequence of the fact that about 60 % of the occupied population is employed in that sector. The government is setting the example here by transferring a number of central government services from The Hague to Groningen, Leeuwarden, Emmen, Zwolle and Heerlen or by establishing new departments there.

Nevertheless, a large number of doubts have arisen in respect of this revised policy. These doubts generally centre around two points:

1 – doubts about the essential correctness of the dispersal policy: do not the effects to disperse economic activities over the country, particularly where they include their restraint in the "Randstad", ignore the "natural" advantages of that region, to the disadvantage of the "Randstad" and thereby of the whole of the Netherlands? (see, *inter alia*, "Orienteringsnota" (Orientation Report), 1973 and "Verstedelijkingsnota" (Urbanisation Report), 1975, the first two volumes of the Third Report on Physical Planning in the Netherlands.)

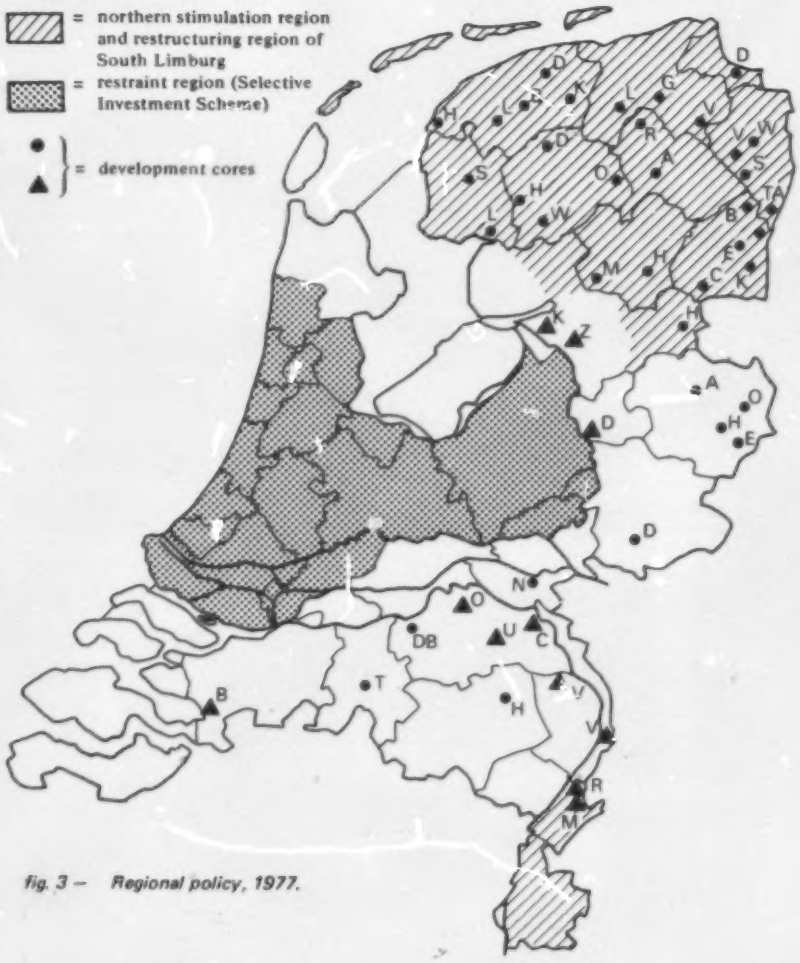

= northern stimulation region and restructuring region of South Limburg
= restraint region (Selective Investment Scheme)
= development cores

fig. 3 – Regional policy, 1977.

2 – doubts arising from the unfavourable economic development of the last few years: can the Netherlands still afford, in view of the greatly increased unemployment, to permit itself to restrict the possible establishment or expansion of industries from such motives as the desire for dispersal (or protection of the environment – see Chapter III of this Bulletin, p. 38).

Reference should be made lastly to the *international context*, within which the dispersal question should increasingbe viewed. Here follow a few thoughts on this aspect:

- Reference has already been made above to the doubts existing about the correctness of the measure for restraining the economic development of the "Randstad". These doubts are partly fed by the concern that the measures will place the "Randstad" in a weaker economic, social and cultural competitive position relative to other urban concentrations of Western Europe, such as the Ruhr, Brussels-Antwerp, Paris and London.
- The development in large parts of the three southern provinces of Zeeland, North Brabant and Limburg has been clearly stimulated in recent decades by their central location internationally, which is in sharp contrast to the "marginal position" which these provinces have always occupied within the national context.
- The situation of the northern stimulation area, however, is no more promising when viewed from this angle. The northern Netherlands have a fairly eccentric location relative to the regions of urban concentration referred to above, while comparable problems are to be met with over the frontier in North Germany.

3. Case Studies

The concluding section of this chapter about Dutch industry is devoted to short case studies of six major Dutch enterprises. The treatment is very summary. For further information or documentation material the addresses of these or other enterprises can be obtained through the Netherlands Embassies and Consulates or the IDG.

First, a table with figures of employment and turnover:

Concern	no. of employees	of whom in the Netherlands		turnover 1975 (millions of guilders)
			%	
1. Philips (Sept. 1976)	394,300	88,500	23	27,115
2. Royal Dutch Shell (1976)	153,000	18,000	12	98,643
3. Estel (Hoogovens) (end 1975)	75,500	24,500	32	8,431
4. Rijn-Sch./Varolme (end 1975)	32,500	26,800	82	3,133
5. DSM (end 1975)	32,000	23,600	74	7,620
6. Unilever (end 1976)	317,000	17,650	6	36,705

1. Philips

Began in 1891 with an electric light bulb factory, established at Eindhoven by the engineer G. Philips. The concern now employs 400,000 people, 23 % of them in the Netherlands, 51 % in other west European countries and 26 % in countries outside Western Europe (to an increasing extent in the developing countries). Altogether, there are Philips factories in 50 countries. Within the Netherlands there has been a considerable decentralisation to the "stimulation areas", among other places (see p. 15). The headquarters is still Eindhoven, with more than 40 % of Philips Dutch employees (see photograph VI), but in addition there are establishments in 70 municipalities throughout the country. Two main groups of products can be distinguished: *consumer products* (more than half of the total production), including light bulbs, radio and television sets, domestic appliances, and *professional equipment*, such as telecommunications apparatus, data systems, medical apparatus etc.

There has been a constant expansion of the range of products, in which a marked regional differentiation is discernible: the "farther from home", the simpler the articles which are produced. In the Netherlands the emphasis is coming to lie increasingly on forms of production which require relatively high investments and a low labour intensity.

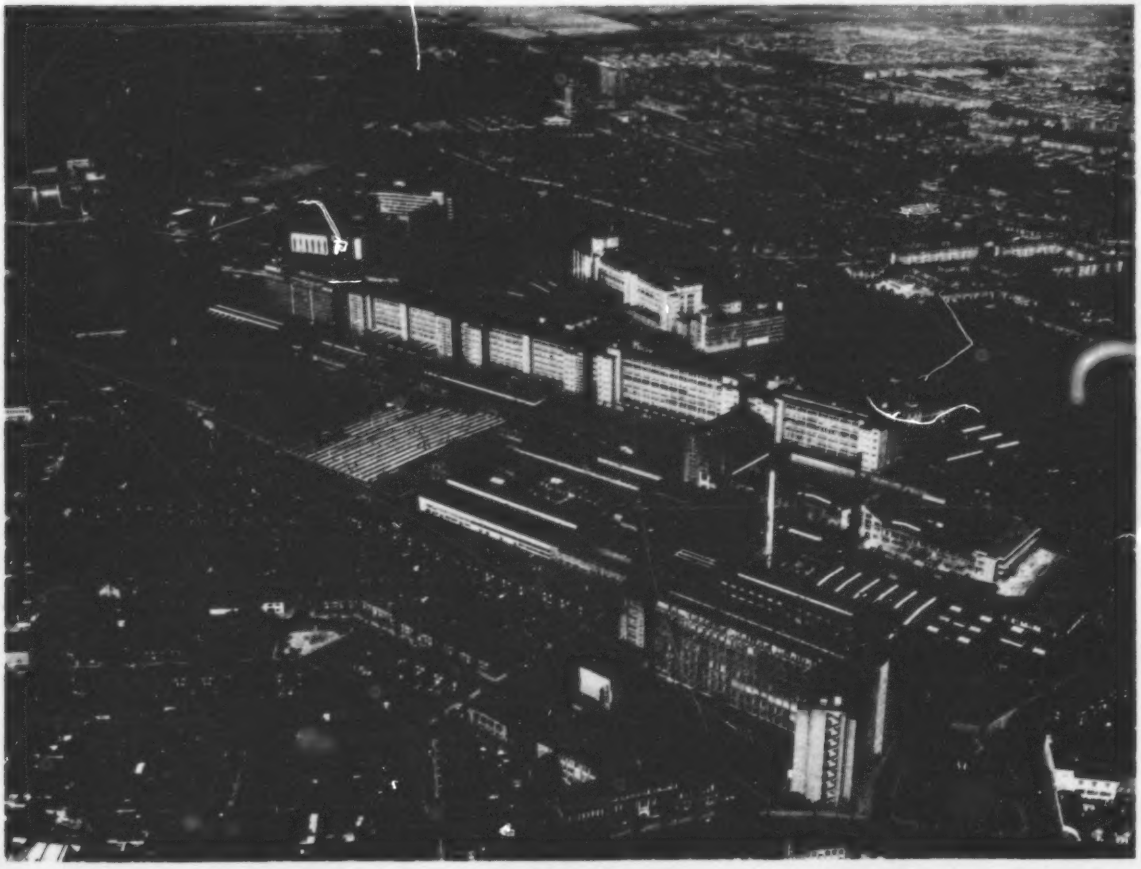
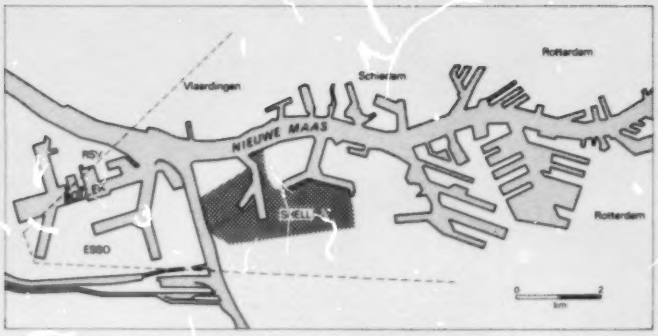


Photo VI — The Philips factory complexes dominate the townscape of Eindhoven.



= limits of photograph VII

fig. 4 — Section of the port area west of Rotterdam.

2. Royal Dutch Shell

Only a small proportion (10 %) of the employees of this concern work in the Netherlands. It was created from an early merger, in 1907, of a Dutch and a British firm. The Dutch firm was the "Royal Dutch Company for the Exploitation of Petroleum Sources in the Netherlands Indies" (now Indonesia).

In Western Europe the company is engaged mainly in the refining of crude oil into a variety of end-products (petrochemical industry), the exploitation of the oil taking place largely outside Europe. The firm participates in many other enterprises, is also involved in the transport of petroleum (Shell tankers) and has a 50 % share in the exploitation and transport of oil and natural gas in the Netherlands. Much work is also done in the Netherlands in the field of administration and research.

The main establishment in the Netherlands is the refinery at Pernis, just west of Rotterdam on the left bank of the New Waterway. It is one of the world's largest refineries and the oldest in the Netherlands (1936). After the damage of the Second World War it was rapidly expanded to permit the production of an increasingly wide range of products. Besides many petroleum products (motor fuel, diesel oil, central heating oil, paraffin etc.) Shell Chemicals manufactures detergents, plastics, artificial fibres, agricultural chemicals etc.

Photo VII — Oil refineries W. of Rotterdam, looking E. (see fig. 4). In the foreground the Chemiehaven of the Botlek complex; in the centre the ESSO refineries and, behind, the Shell refineries at Pernis. Far left, the New Waterway, with Vlaardingen on the far side.

The refinery at Pernis (see fig. 4 and photograph VII) obtains its crude oil partly by tanker, "direct from the quay", partly by pipeline from transhipment points closer to the mouth of the New Waterway. Transport to the hinterland also takes place partly by water and partly by pipeline. The main destination is West Germany, but some also goes to Belgium. Until the time of the energy crisis the crude oil was imported mainly from the countries around the Persian Gulf, but since then Africa, including Nigeria, has also become an important supplier.
The Shell refinery is a clear example of a "balancing refinery", i.e. a plant which is able, because of a large capacity and a fine mesh of pipelines to the hinterland, to satisfy the changing needs for raw materials and semi-manufactures of the many enterprises in that hinterland.

fig. 5 – Area around the entrance to the North Sea Canal.

A separate problem is the air pollution caused by this industry. This is of course not a problem specific to the Netherlands or Rotterdam, nor is Shell the only "culprit", but the consequence are felt particularly intensely here, because the refinery is situated on the south-west side of densely populated residential areas (Schiedam, Rotterdam North), while the direction of the prevailing winds is also south west! Efforts are being made to limit the harmful effects somewhat by building extra high chimneys etc. (up to 200 m., see photograph).

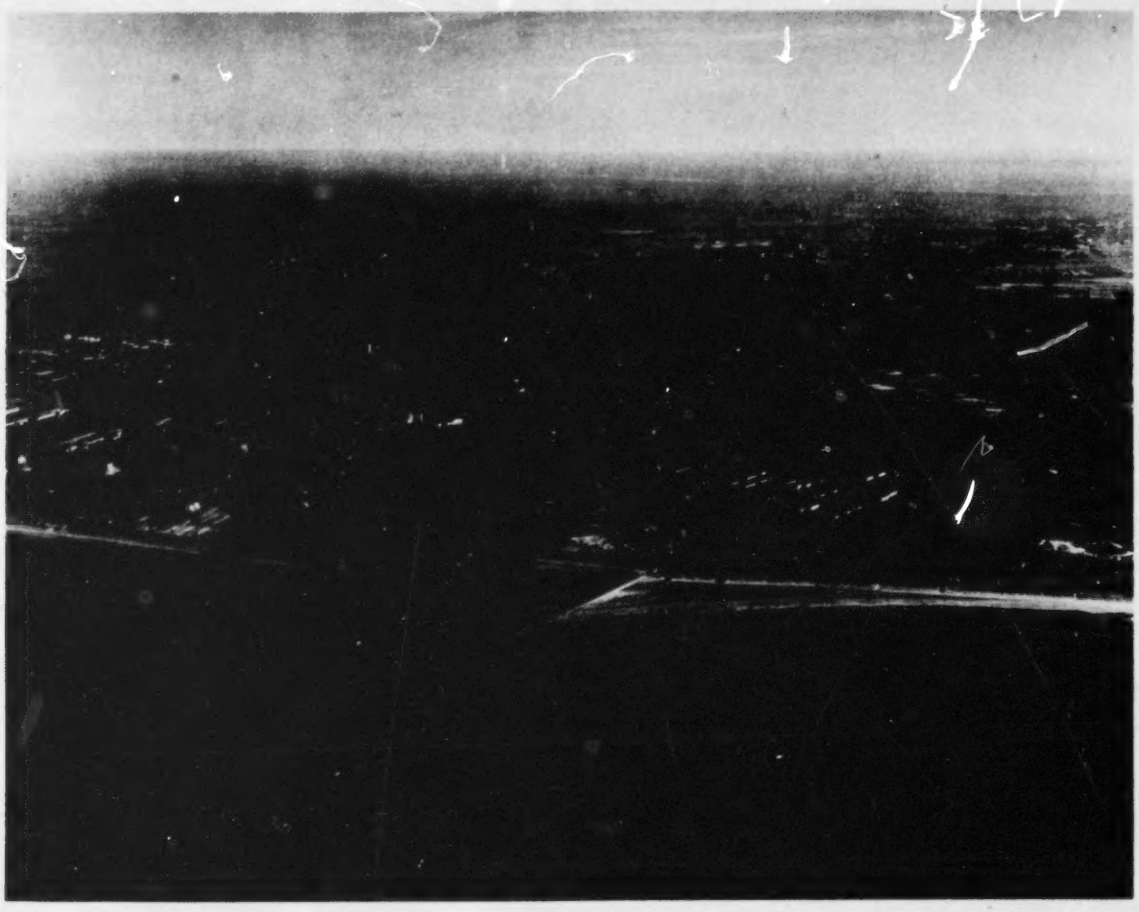


Photo VIII – Entrance to the North Sea Canal, looking E. In the foreground, the harbour piers, with the dunes to left and right. Behind, the locks complex, with the iron and steel plant to the left and the fishing point of IJmuiden to the right (see fig. 5).

3. Estel (Hoogovens)

This is a "textbook example" of a basic industry in the metal sector, established on the coast of a country that does not possess its own raw materials. The concern was established in 1918, with the State owning more than a one-third share. Shortly after the Second World War a form of collaboration began with steel using plants in West Germany, which resulted in 1972 in a merger with Hoesch. The new enterprise, known as Estel, is the seventh largest steel concern in the world.

The Dutch steelworks began production in 1924. There are now seven blast furnaces at IJmuiden. 4.5 million tons of steel were made from the pig-iron they produced in 1975 (there has since been a reduction because of the unfavourable general economic situation). The annual capacity is 6 million tons. The raw materials, fuel and auxiliary material are all imported from abroad and largely from overseas: ores from Canada, Sweden, Spain, Africa etc., coal from the United States and limestone from Belgium. Until 1975 a proportion of the coke required was supplied from South Limburg. In addition to the blast furnaces a steel plant was built to convert the pig-iron into steel (sheets, bars, wire, tin-plate). In auxiliary plants the lime slack from the blast furnaces is made into cement, and the furnace and coke oven gases processed into ammonia (synthetic materials and fertilisers).
The concern has also acquired an interest in aluminium manufacture in Delfzijl. Here again one can observe a striving for diversification in order to reduce vulnerability.

The enterprise is situated extremely favourably from the point of view of communications (see fig. 5 and photograph VIII, p.19) namely, at the entrance to the North Sea Canal and on the seaward side of the locks, so that the ore carriers have direct access to the basins serving the works. There are also good connections for import and export to and from the hinterland, including the North Sea and Amsterdam-Rhine Canals and the road and rail network.

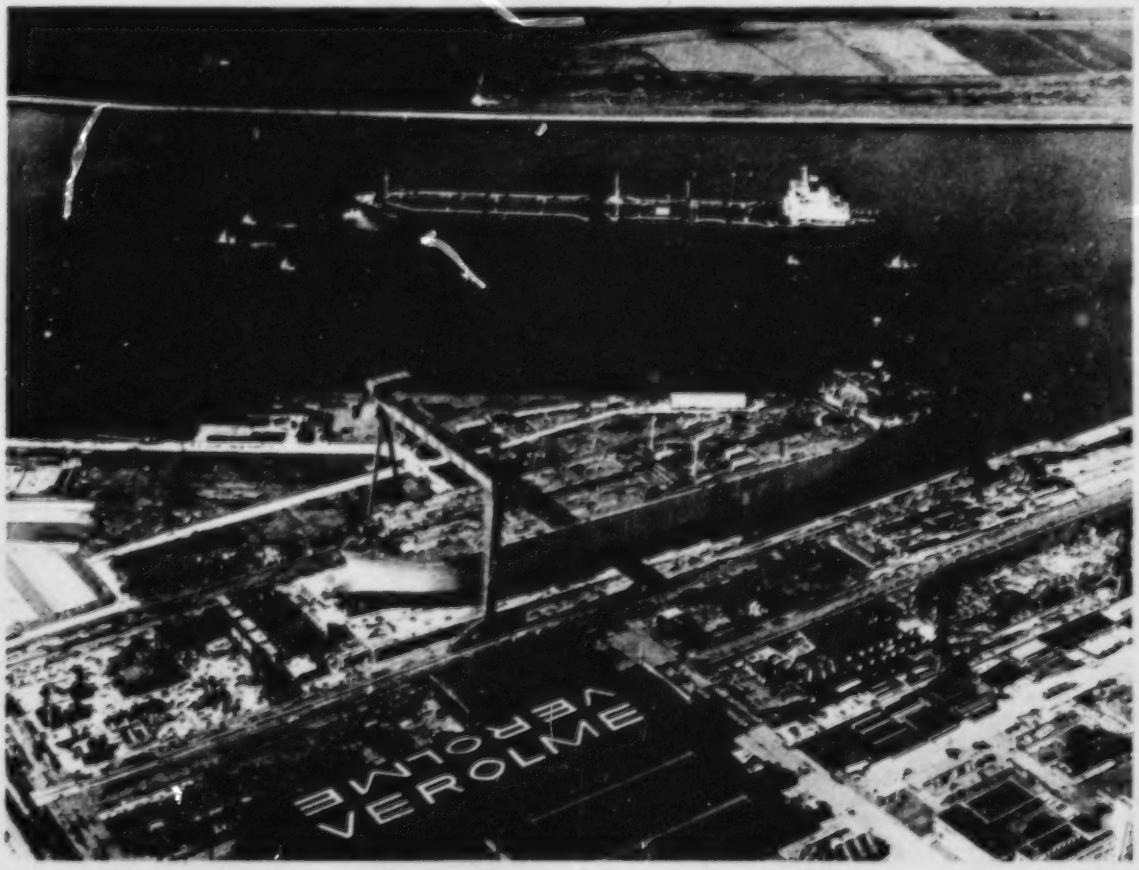


Photo IX — Verolme shipyard (RSV) in the Botlek area W. of Rotterdam (see RSV on fig. 4). Behind, the New Waterway.

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The ship (both sea-going and river) is by far the most important form of transport for the import of raw materials, followed by rail. The ship also predominates for the export of the finished products, although to a less degree, with the lorry in second place.

1975	Percentages Import	Export
ship	82	68
train	17	9
lorry	1	23

4. Rijn-Scheide-Verolme

This concern, which comprises engineering works and shipyards, is the result of a large number of mergers and take-overs during the past 25 years. The firm of Verolme is a one-man business which grew at a tempestuous rate after the Second World War and specialised, among other things, in the building of large oil tankers, for which a large shipyard was built in the Botlek area west of Rotterdam in the 1950s (RSV on fig. 5, photograph IX). In the course of time Verolme took over a large Amsterdam shipyard (NDSM) and a number of engineering works in different parts of the country. The Rijn-Schelde concern, in its turn, is the result of a number of mergers, among them a number of shipyards in and around Rotterdam, with the Schelde yard in Flushing, as well as a few engineering works.

In 1971 the two enterprises (Verolme and Rijn-Schelde) merged to form the Rijn-Schelde-Verolme concern. This occurred under pressure from the government, which made the merger a condition for the granting of credit guarantees. Government support had proved necessary in the face of the structural difficulties which arose at the end of

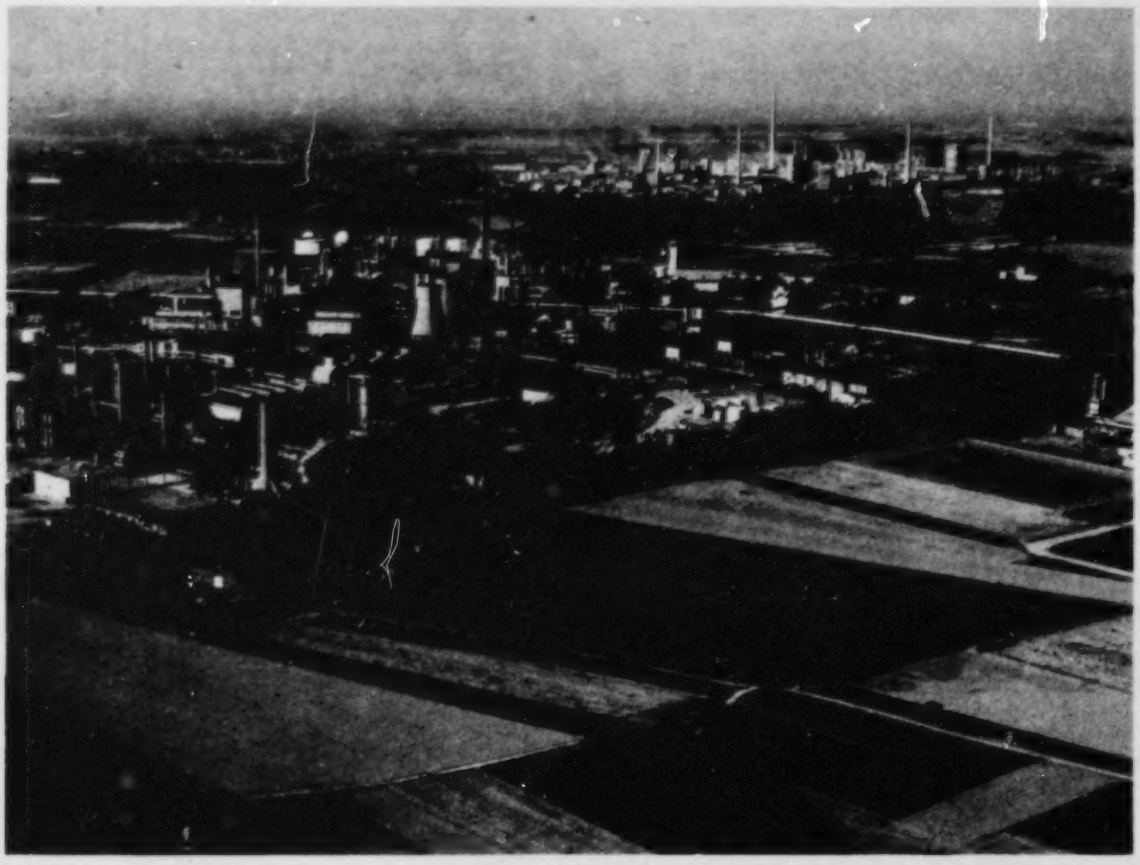

Photo X — DSM plant in the western mine district of South Limburg. In the foreground, the synthetic fibres plant, behind, the nitrogen fixing plant (artificial fertilisers).

the 1960s, mainly as a result of the competition from Japan. In this concern, too, attempts have been made to spread the economic risk by means of a high degree of diversification. In addition to building and repairing ships and machinery, the firm is engaged in many kinds of electrical engineering, the production of turbines, nuclear energy plant etc.

The firm comprises at present 11 divisions, including – apart from the activities already mentioned – such things as the building of off-shore material (oil rigs), the Process and Environment products group (equipment for water supply, effluent treatment, refuse incineration) and the building industry group (heating and ventilation, escalators etc.).

There is also a great diversity of production within the shipbuilding sector. Besides oil tankers (at present not in a flourishing state because of the energy crisis and Japanese competition), production includes container ships, roll on/roll off ships, pipe-laying ships etc. In addition to 5 shipbuilding and repairing establishments in the Netherlands (3 in Rotterdam and district, 1 in Amsterdam and 1 at Flushing), RSV has yards in Ireland and Brazil.

5. Dutch State Mines (DSM)

DSM is a geographically interesting example of an industry deliberately located at the source of its fuel and raw materials and which has remained on its original site after the main locational factor has ceased to apply, with substitute fuel and raw materials being imported from elsewere. We are of course referring here to the coal mining in South Limburg, which ceased completely between 1966 and 1975 (see p. 12).

After 1930 an extensive chemical industry developed in the western mine district, based on the gas derived from bituminous coal. From about 1965 the industry turned increasingly to the refining of petroleum and natural gas, largely received by pipeline.

With the closing of the mines the labour force declined considerably and many miners were retrained as factory workers.

The enterprise, which has been derived directly from the four state mines and is therefore still wholly a state enterprise, now produces at different plants such things as artificial fertilisers, raw material for artificial fibres, industrial chemicals, plastics, organic chemical products etc. (photograph X, page 21).

6. Unilever

A world-wide concern, created in 1929 by the fusion of a group of British enterprises (Lever Brothers, soap manufacturers) with the Dutch Margarine Unie. The basis of the merger was the common use of tropical oils and fat as raw materials.

In the Netherlands the margarine concern originated from Oss in North Brabant, but it moved later to Rotterdam in connection with the import of raw materials from overseas. Besides margarine Unilever now also produces large quantities of soap and detergents in Rotterdam and vicinity.

After 1950 a number of enterprises throughout the Netherlands were taken over. They are largely concerned with processing home-produced agricultural products, such as meats, canned and deep-freeze products.

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II – STATISTICS

a – Introduction

A number of readers of the last bulletin were also asked to make their wishes known in respect of what statistical data should be included in future issues. In view of the varied reaction it is difficult to meet everyone's wishes. Attention will certainly be paid to a few regularly mentioned themes, such as the movement of goods in the port of Rotterdam and the demand for more *regional data*.

As far as the latter is concerned, however, the possibilities are limited, because of the volume of data. Only occasionally will regional (i.e. provincial or grouped provincial) data be found on the following pages. To compensate for this we shall give a review of the nature of the available regional data, the regional divisions employed, of some of the publications in which the figures are to be found and of the bodies from whom the publications can be obtained and from whom further information is available.

fig. 6 – Division into major regions and provinces.

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For the purposes of regional statistics the Netherlands can be divided up in the following ways:

a – 5 (or 4) major regions
b – 11 provinces
c – 40 COROP regions
d – 129 Economic geographic regions
e – 842 municipalities

In addition, there are further regional divisions which are employed only in specific instances, such as the division into agricultural regions, tourist regions, or the population figures by agglomeration.
The most important bodies producing statistics are:

– Centraal Bureau voor de Statistiek (Central Statistical Office – CBS),
Prinses Beatrixlaan 428,
Voorburg, tel. 070 - 694341.

– the administrations of the 842 municipalities.

The CBS publishes a large number of statistical reviews in many fields (including population – economy – development and recreation – environment) and at varying frequencies: monthly, quarterly, annually, one-off. Some of the publications of interest to our readership are listed in the bibliography at the end of this Bulletin.
For the Netherlands as a whole these data are to be found in the annual Statistisch Zakboek and – more extensively – in the Statistical Yearbook of the Netherlands (English text).
There follows a brief review of the regional divisions given above and of the available statistics relating to them.

a – Major regions

The CBS generally employs the division I north, II east, III west, IV south-west, V south. Fig. 6 shows that these major regions consist of complete provinces. The Southern Lake IJssel Polders (East and South Flevoland) have not yet been allocated to provinces and are usually mentioned separately, or sometimes included in the Eastern Netherlands. A number of publications work not with five, but with four major regiones (N, E, W, S), which means that the South West (i.e. province of Zeeland) is then included in West or South.

boudaries of provinces + COROP regions
boundaries of COROP regions
boundaries of sub-regions

fig. 7 – Division into COROP regions.

boundaries of provinces + E.G. regions
boundaries of E.G. regions

fig. 8 – Division into economic geographic regions.

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b – Provinces

As long as no final decision has been taken about the regional rearrangement of the Netherlands, the provincial data are based on the traditional 11 provinces (see fig. 6). As stated in the IDG Bulletin for 1975 - 76 (p. 36), work is proceeding on a rearrangement by which the 11 provinces will be replaced by some 25 "gewesten" (generally equivalent to city regions). This process will not be completed for several years, however.

Statistical data about the 5 major regions and 11 provinces – and, in a number of instances, about the 4 largest municipalities of Amsterdam, Rotterdam, The Hague and Utrecht – are contained in the first part of the "Regionaal Statistisch Zakboek". This is a publication of the CBS, which first appeared in 1973 and proved to meet a definite need. The second edition appeared in 1975, with figures for 1974. The first part of this edition contains 168 pages and relates to the same number of topics as mentioned on p.24. A new edition will appear during the course of 1977.

c – COROP regions

These form a provisional regional division of the country, devised by the "Coördinatie-commissie Regionaal Onderzoekprogramma" (Co-ordinating Committee for the Regional Research Programme – COROP). The boundaries of the regions take into account the provincial and municipal boundaries and, in broad outline, the 40 regions are based on the presence of one or more urban centres and the surrounding rural hinterland.
The division is shown in fig. 7. Sub-regions are distinguished within 3 of the 40 regions, i.e. Amsterdam, Rijnmond and the city region of 's-Hertogenbosch.
Data about the COROP regions are to be found, *inter alia,* in the second part of the Regionaal Statistisch Zakboek (65 pages in the issue dealing with 1974). In general, less data are available for these regions than for the major regions and provinces, for example.

d - Economic geographical regions

The division of the Netherlands into 129 Economic geographical regions, illustrated in fig. 8, has been in use for many years. Many data, obviously mainly economic, but also covering such aspects as internal migration, are available for these units.

e – Municipalities

On 1st January 1976 the Netherlands has 842 municipalities, a number that has been continually declining for many years because of amalgamations etc. (994 municipalities in 1960). Each municipality collects statistics, though obviously the larger ones publish a greater variety of data than the small ones.

The primary data relating to land area, population and population density of all classes of area mentioned here are to be found in a small, but useful annual publication of the CBS: "De bevolking der gemeenten van Nederland op 1 januari 19...." (The population of the municipalities of the Netherlands on 1st January 19....).
It contains the primary data mentioned above for the major regions, provinces, COROP regions, Economic geographic regions, municipalities, groups of municipalities (arranged by degree of urbanisation) and urban agglomerations with more than 100,000 inhabitants.

We should like to refer, finally, to two other statistical publications, which are of particular interest to people wishing to compare the Netherlands with other countries, or to compare recent data about the Netherlands with those of earlier years:

- "Basic Statistics of the Community: Comparison with some European countries, Canada, the United States of America, Japan and the Union of Soviet Socialist Republics."
  Annual publication of the Statistical Office of the European Communities (1049 Brussels, Bâtiment Berlaymont, 200 rue de la Loi, Belgium). Available in Dutch, French, German, English, Danish and Italian versions.
- "75 years of Statistics of the Netherlands" jubilee publication, 1975 of the CBS *, with figures for the period 1900 - 1975 (Dutch and English text).

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* All CBS publications are obtainable from Staatsuitgeverij, Chr. Plantijnstraat, The Hague.

b - Statistical data for 1975/1976

As usual, in this section, some statistical information is given for which there has proved to be a particular need among teachers abroad giving lessons about the Netherlands.
Unless otherwise stated, the data relate in general to 1975 or to the situation at 1st January 1976 and are derived from the "Statistisch Zakboek, 1976" of the CBS.

Area and Land Use

At 1st January 1976 the following were the area figures for the Netherlands (unchanged since 1 January 1975):

a – land area (i.e. exclusive of waters wider then 6 metres) – 33,810 sq. km.

b – total area incorporated into municipalities – 36,948 sq. km.

c – total territory of the Netherlands (i.e. inc. estuaries, territorial waters etc.) – 41,160 sq. km.

It is usual to take the figure given under b as the area of the Netherlands, but the figure given under a is used for calculating population density per square kilometre (of land).

Nor were there any spectacular changes during the year in respect of the division of land use. For these data – situation at 1st January 1975, by province – we refer, therefore, to the IDG Bulletin for 1975 - 76.

Over a period of several years combined, important changes in land use do occur, taking the country as a whole:

Changes in land use, in hectares	1973-74-75
Taken into use for building and traffic purposes	19,361
Idem for recreational purposes	5,881
Idem total	**+ 25,242**
Increase in cultivated land	10,931
Loss in cultivated land	25,108
Net change cultivated land	**– 14,177**
Increase in area of woodland	2,679
Reduction in area of woodland	1,307
Net change woodland	**+ 1,372**
Increase in natural areas	537
Decrease in natural areas	9,804
Net change natural area	**– 9,267**

The figures show clearly that there is a continuing demand for land for building and traffic purposes and that, in the first place, cultivated land, followed by the natural areas, has to give way to it.

Population

At 1st January 1976 the Netherlands had over 13.7 million inhabitants. The natural increase in 1975 was again lower than during the preceding year, mainly as a result of the continuing decline in the birthrate. The year 1975, however, showed an exceptionally large gain from foreign migration caused by the immigration of Surinamese before their country became independent in November 1975. There are now about 130,000 Surinamese living in the Netherlands. In 1976 this immigration, like that of workers from the Mediterranean countries, was greatly reduced (in the latter instance because of the less favourable economic situation), so that a considerably lower growth figure may be expected for that year.

The continuing decline in the birth rate also has an influence on the projections for the coming decades. The CBS now expects that the population in the year 2000 will lie between 14.3 and 15.2 million, which is more than 25 % lower than the forecasts of about 10 years ago, which gave an estimate of 20 million Dutchmen in 2000.

Basic Demographic data (per 1,000 inh.)	average 1965-74		1974		1975	
Birth rate	17.5		13.7		13.0	
Death rate	8.2		8.1		8.3	
Natural increase		9.3		5.7		4.7
Immigration	6.2		6.9		9.3	
Emigration	4.7		4.5		4.1	
Net migration gain		1.5		2.4		5.3
Total pop. growth		10.8		8.1		10.0

The table below shows the distribution of the population over the provinces and regions (see fig. 6, p. 23), as well as data about population density and growth during the past 5 years.

1st Jan 1976	Land area in sq km*	Population x 1,000	Population per sq km of land	Growth since 1st Jan 71 %
Groningen	2329	540,1	232	3,4
Friesland	3340	560,6	168	6,4
Drenthe	2644	405,9	153	9,0
Northern Netherlands	8313	1506,6	181	6,0
Overijssel	3804	985,6	259	5,7
Gelderland	5010	1640,0	327	7,0
Southern Lake IJssel Polders	961	35,6	38	107,0
Eastern Netherlands	9775	2661,2	272	7,1
Utrecht	1328	867,9	653	6,3
North Holland	2656	2295,9	865	1,6
South Holland	2869	3048,6	1063	1,9
Western Netherlands	6853	6212,4	907	2,4
Zeeland	1790	332,3	186	7,1
South West Netherlands	1790	332,3	186	7,1
North Brabant	4912	1967,3	401	8,1
Limburg	2166	1051,6	485	3,9
Southern Netherlands	7078	3018,9	427	6,6
NETHERLANDS **)	33810	13733,6	406	4,7

*) area exc. waters wider than 6 metres
**) population of the Netherlands including persons with no fixed abode, entered in the Central Population Register.

The deviations from the national average by the regional figures for growth since 1971 are largely the result of internal migration flows. The provinces of North and South Holland – and particularly the cities of the West Holland conurbation (Randstad) within them – show a large migration loss. Apart from the "Green Heart" of the Randstad, this loss is largely absorbed in the adjoining provinces of Utrecht, Gelderland, Zeeland and North Brabant.

The table below summarises the net internal migration changes for the period 1970 - 74:

Net internal migration, x 100 persons	1970	1971	1972	1973	1974
Groningen	0	*–3*	*–5*	*–9*	3
Friesland	*–8*	1	20	41	28
Drenthe	16	32	31	44	42
Overijssel	*–9*	4	2	7	7
Gelderland	81	79	79	81	77
Utrecht	8	13	40	46	15
North Holland	*–64*	*–87*	*–82*	*–153*	*–135*
South Holland	*–76*	*–115*	*–177*	*–207*	*–199*
Zeeland	14	23	15	15	20
North Brabant	39	64	84	129	118
Limburg	0	*–11*	*–5*	3	*–13*

source: 75 years of Netherlands Statistics, CBS, The Hague.

The marked fall in population of the largest cities in the "Randstad" continued in 1975, but there appeared to be a turning point in respect of the other towns with more than 100,000 inhabitants. In 1973 and 1974, 14 of the 16 towns lost population; in 1975 only 9 of the 16 did so:

Population x 1,000	1 Jan 74	1 Jan 75	1 Jan 76	Population x 1,000	1 Jan 74	1 Jan 75	1 Jan 76
Amsterdam	770,8	758,0	751,2	Nijmegen	148,2	147,8	148,5
Rotterdam	635,9	620,9	614,8	Enschede	142,1	141,1	141,6
The Hague	494,7	482,9	479,4	Apeldoorn	130,7	132,8	134,1
Utrecht	263,6	256,0	250,9	Arnhem	127,7	126,2	126,1
Eindhoven	191,8	192,0	192,6	Zaanstad	124,9*	124,6	124,8
Haarlem	168,2	165,9	164,7	Breda	119,2	118,0	118,1
Groningen	166,8	164,7	163,4	Maastricht	111,6	111,6	111,0
Tilburg	152,5	152,1	151,5	Dordrecht	101,3	101,1	101,8

*) increase since 1973 as a result of boundary changes.

In the table above the populations of those towns which showed an increase since 1st January at the previous year have been underlined. See fig. 1 on p. 11 for the location of the towns. A comparison with the population on 1st January 1965 is to be found on p. 23 of the IDG Bulletin for 1975 - 76.

ECONOMY

General

The break-down of the economically active population as described in the previous bulletin has given rise to questions, one reason being that the percentages given show remarkable differences from those quoted in the Basic Statistics of the European Community. The reason for these differences is to be found in the different methods used. The CBS data, which are based on the labour volume in man-years, give the following break-down for 1975:

1975, %	Economically active population	National income
Agriculture & fishing	6.2	5.2
Mining & manufacturing	32.5	39.3
Services sector	57.0	55.5
Unemployed	4.3	-

The agricultural sector

The division of the cultivated land – the 25,000 sq. km. of which account for more than 68 % of the total area of the country – has exhibited in recent years mainly a shift from arable to grassland:

Cultivated land %	1960	1970	1975
Arable	39.5	34.5	32.5
Horticulture	5.5	5.5	5.5
Grassland	55	60	62

Source: Min. of Agriculture and Fisheries. De Nederlandse landbouw in feiten en cijfers (Dutch farming in facts and figures), 1976.

This change can be partly attributed to the fact that there has been a decrease in the growing of fodder crops on the so-called mixed holdings. Arable and livestock farming are becoming increasingly independent of each other on these holdings.
Specialisation and intensification are producing ever larger yields per unit:

Production	1960	1975
kg. milk per cow	4275	4620
no. of eggs per hen	210	240
kg. of wheat per ha.	4700	4900
tons of potatoes per ha.	27	33

Source: as above

Partly for this reason the significance of agriculture for the Dutch economy as a whole remains great, despite the relatively small share of the economically active population employed in it.
The value of agricultural exports in 1975, for example, amounted to 21.75 thousand million guilders, thus exceeding the value of agricultural imports (14.25 thousand million guilders) by 7.5 thousand million. Agricultural products accounted for 24.6 % of total exports.

The figures for the degree of self-sufficiency in a number of agricultural products also emphasize the importance of the agricultural sector and particularly of livestock farming within it.

Degree of self-sufficiency %	1973-75
Wheat	47
Potatoes	128
Sugar	105
Vegetables	183
Fruit	82
Butter	351
Cheese	234
Pig-meat	224
Eggs	159

Source: as above

Industry

Some of the statistics belonging to this section are to be found in the leading article of this bulletin.
A summary of the different industrial orders, arranged by turnover (in the Netherlands), shows how the industrial picture is dominated by the metal, food, drink and tobacco, and chemical industries:

Turnover in 1,000 million guilders	1975
Food, drink & tobacco	27.9
Metal	15.5
Chemicals	14.0
Other manufacturing	21.7
Mineral exploitation	5.3
Public utilities	7.7
Total industry	92.1

The distribution of the number of industrial establishments and of persons employed over the provinces on 30th September 1975 was as follows (see map on cover):

Province	establishments	employment persons x 1,000
Groningen	466	37,8
Friesland	481	33,1
Drenthe	322	26,4
Overijssel	1027	82,2
Gelderland	1676	112,2
Utrecht	703	48,6
North Holland	1849	149,3
South Holland	2405	186,5
Zeeland	212	20,8
North Brabant	1850	193,5
Limburg	914	86,8
NETHERLANDS	11905	977,1

Internal trade

In 1975 the value of imports was 87,307 million guilders and of exports, 88,526 million guilders. The percentage of cover, therefore, was 101. The following two tables, versions of which also appeared in the two previous bulletins, relate to the nature of the goods imported and exported and to the countries of origin and destination.

1975, in % Imports		Exports	
Raw materials & Semi-manufactures	63	Unprocessed agricultural products	9
Consumer goods	16	Minerals	5
Capital goods	13	Manufactures, total	85
Other goods	8	of which:	
		Food, drink & tobacco	17
		Textiles & clothing	5
		Petroleum products	12
		Chemical products	18
		Metal products	29
		Other manufactures	5

The countries with which the Netherlands, traded in 1975:

Countries, 1975, in %	Imports		Exports	
West Germany	26		30	
Belgium & Luxembourg	12		14	
France	8		10	
United Kingdom	6		9	
Italy	4		5	
Other EEC partners	1		2	
total EEC		56		71
USA		10		3
other countries		34		26

The most important port district is still Rotterdam/Europort (83 % of all goods discharged and loaded in Dutch ports in 1975), although the total movement of goods has not yet been restored to the level of before the energy crisis: 1973 discharged and loaded: 310 million tons; 1975: 269 million tons.

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In response to the interest which has been expressed, we give lastly a breakdown of the movement of goods according to import, export and transit, and to the most important commodity groups:

Movement of goods 1975 x 1,000 tonnes	Imports + transit = discharged	Exports + transit = loaded	Total
Mineral oils	125,927	48,798	174,725
Ores	32,594	677	33,271
Coal	2,624	4,512	7,136
Fertilisers	2,699	1,577	4,276
Chemical products	4,261	4,567	8,828
Grains	6,972	2,025	8,997
Animal feeding stuffs	6,482	318	6,800
Oilseeds	4,284	611	4,895
Metals & Metal goods	1,927	2,803	4,730
Crude minerals	3,690	690	4,380
Other commodities	8,412	6,735	15,147
Total	199,872	73,313	273,185

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III – BRIEF NOTES

1. Traffic

Reference was made in last year's Bulletin to the government's intention to slow down the building of new roads. This is in response to the ideas put forward in the "Orientation Report" (= part I of the Third Report on Physical Planning in the Netherlands) relating to the limitation of mobility, concern for the environment and landscape and the reduction in the consumption of raw materials.

In the spring of 1977 the Minister of Traffic and Water Affairs published the "Struktuurschema Verkeer en Vervoer" (Outline Proposals for Traffic and Transport), as a complement to Parts 2 and 3 of the above-mentioned Third Report, which related to Urbanisation and the Rural Areas, respectively (on these, see also section 3 of this chapter, on physical planning).

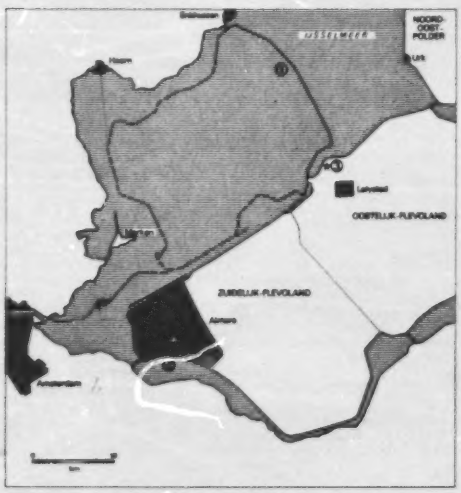
In the "Struktuurschema" the government's intention is given concrete form in a number of proposals. Here are some of the main points: in the next 20 years the motorway network will be extended by about 1,000 km. (present length 1,600 km.); these plans are considerably more modest than the National Road Plan which has been in force until the present. In effect, 20 roads which feature in the National Road Plan will not be built.

The government also hopes to be able to bring about a more selective use of the private car by means of limiting the amount of parking space, or making it more expensive, and by encouraging the use of public transport. In the same connection, the "Struktuurschema" refers to the completion of several new railways during the next few years, notably in the city regions of The Hague, Amsterdam and Utrecht, as well as the Amsterdam-Almere-Lelystad line across the Southern Lake IJssel polders. The decision to build the latter line was taken on the assumption that, towards 1990, Almere would have a population of 100,000 and Lelystad 75,000 (their ultimate capacities are 200-250,000 and 100,000, respectively).

Important for the South-West Netherlands - particularly Zeeland-Flanders - and adjoining areas in Belgium was the government decision at the beginning of 1977 to construct a permanent link across the Western Scheldt. The line of the crossing is situated approximately where the Kruiningen-Perkpolder vehicle ferry at present crosses the estuary (4 on fig. 10, p. 34). The crossing will be built partly as a tunnel - under the busy shipping lane - and partly as a bridge - over the shallow sandbanks south of the navigation channel. Construction will take 5 to 7 years and the cost will be about 800 million guilders.

2. Civil engineering works

Zuyder Zee Works



No decision has yet been taken on whether or not to reclaim the Markerwaard, although in the autumn of 1976 the 'Raad van de Waterstaat' (Council for Water Affairs) presented an advisory report to the Minister concerning the reclamation of a Markerwaard 40,000 hectares in extent (see fig. 9). This is one third smaller than the originally planned 60,000 hectares. The difference relates to the west side, where considerably wider marginal lakes are envisaged and where the island of Marken will not be absorbed into the new polder. Supporters and opponents of reclamation are still diametrically opposed to each other (see, *inter alia*, IDG Zuyder Zee/Lake IJssel Guide, pp. 43-45, and IDG Bulletin, 1975-76, p.32. The advisory report assumes

fig. 9 – Zuyder Zee region.

that ideas about the future use of the polder will be able to crystallize during the course of its reclamation. Moreover, the report states, the Markerwaard should not be viewed as an isolated operation, but as the concluding phase of the whole Zuyder Zee project. The report suggests various possibilities for the use of the Markerwaard. It appeals for an early decision in order to ensure a balanced evolution of the division of the land, *inter alia,* in relation to the developments on the old land.
The opponents, however, argue that it is nonsense to reclaim an expensive polder before either the necessity or the future use of it are evident.

At the end of December 1976 the road along the dike from Enkhuizen to Lelystad was opened to traffic (1 on fig. 9). It was already pointed out in the last Bulletin that the completion of this dike will have no influence on the decisions to be taken about the reclamation of the Markerwaard. Even if the idea of reclamation is completely abandoned, the dike will still be necessary for reasons of water control, in order to separate the northern and southern basins of Lake IJssel.

On 30th November 1976 the Minister of Traffic and Water Affairs handed over their house keys to the first inhabitants of Almere in Southern Flevoland (2 on fig. 9). The ceremony took place in the first nucleus of Almere - Almere-haven - situated on Lake Gooi. In the future this nucleus will house 25,000 of the 200 to 250,000 inhabitants who will ultimately live in de polynuclear city of Almere (photograph XI).

Delta Works
Contrary to what was stated in the last Bulletin, it has been decided to adopt a compromise solution for the closing of the Eastern Scheldt.

Photo XI — The first dwellings of Almere-haven in Southern Flevoland (see no. 2 on fig. 9).

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It originally seemed that the proposed solution of a dam with sealable openings would be too expensive, but an alternative designed at the eleventh hour by Rijkswaterstaat appears to be both financially and technically feasible. The government therefore decided in the summer of 1976 to proceed with the building of a storm surge barrier. A large number of piers will be constructed in the three channels in the mouth of the Eastern Scheldt, between which the openings can be closed by means of sliding gates. In normal conditions, when the gates are open, at least 65% of the natural tidal movement will be maintained. Consequently, in combination with the circumstance that the Eastern Scheldt will remain salt, the natural environment will be preserved to a reasonable degree and coastal fishing - including oysters - will remain possible. Discussions are still proceeding about the exact size of the openings.

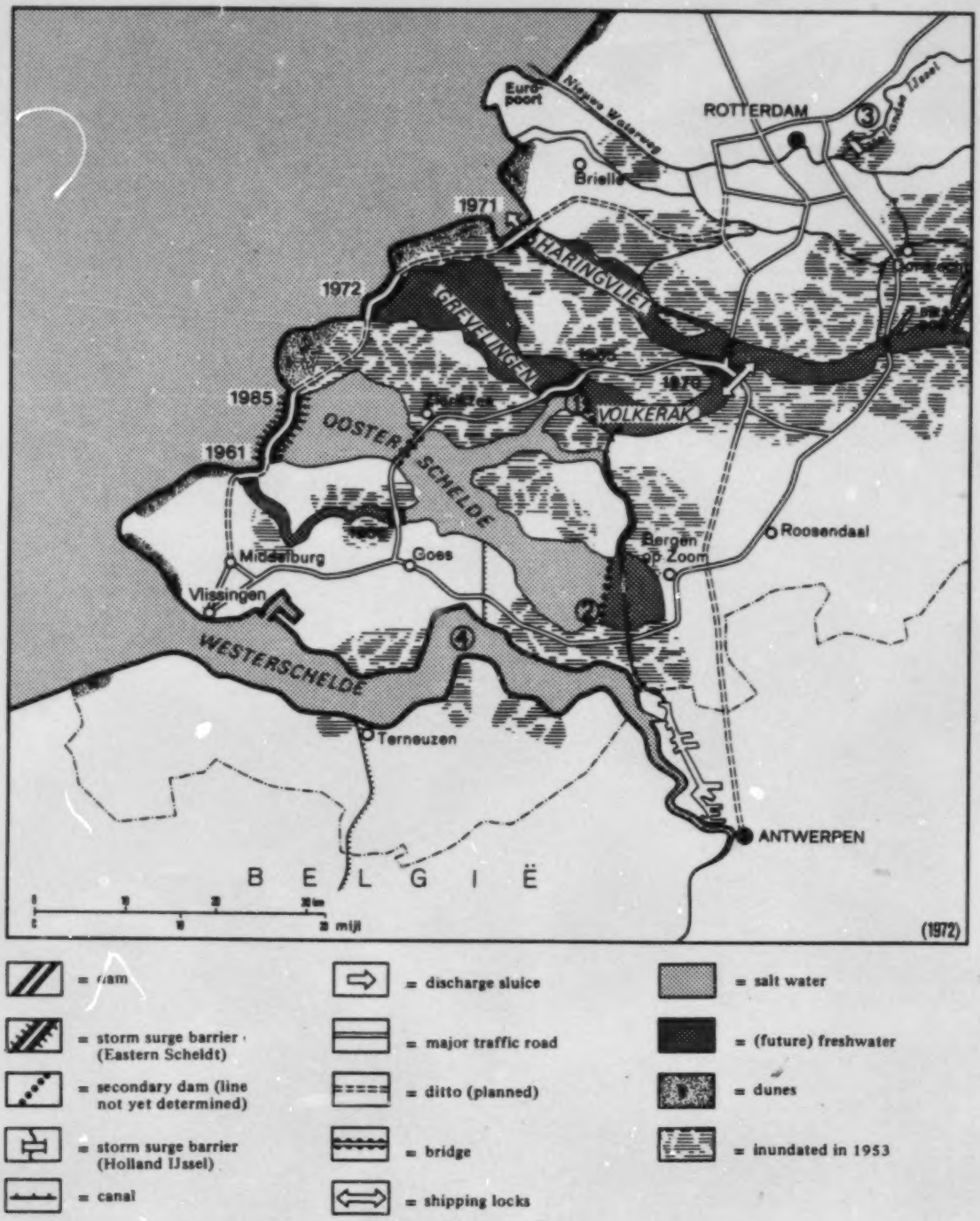

fig. 10 – Delta region.

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A necessary part of this plan is the construction of two 'partitioning' dams, in order to separate the salt and fresh water and to exclude the tide from the Scheldt-Rhine canal. One of these dams, provided with two locks for trains of push-barges and a lock for pleasure craft, will be situated between St. Philipsland and the Grevelingen Dam (Philipsdam, 1 in fig. 10), while the other will run west of the Scheldt-Rhine canal in the eastern part of the Eastern Scheldt (Oesterdam, 2 in fig. 10).

It will be possible to complete the barrier and partitioning dams by 1985. The cost is estimated at 4,135 million guilders, which is over 2,500 million guilders more than the 1,500 million guilders estimated for the original Eastern Scheldt plan, which provided for complete closure.

In the autumn of 1976 the second gate was hung in the storm surge barrier in the Holland IJssel at Krimpen aan de IJssel (3 in fig. 10 and photograph XII). This movable barrier was the first part of the Delta Plan to be completed (1958). The haste with which it was constructed arose from the fact that, at this point, the dikes of the Holland IJssel nearly gave way during the flood disaster of 1953, which would have resulted in the inundation of a large part of the polderlands of Holland. The storm surge barrier has already been closed several times since 1958 in order to hold back the water during gales and at times of high water levels. Each gate is 80 metres wide and 11.5 metres high and one can be used as the main barrier and the other as reserve.

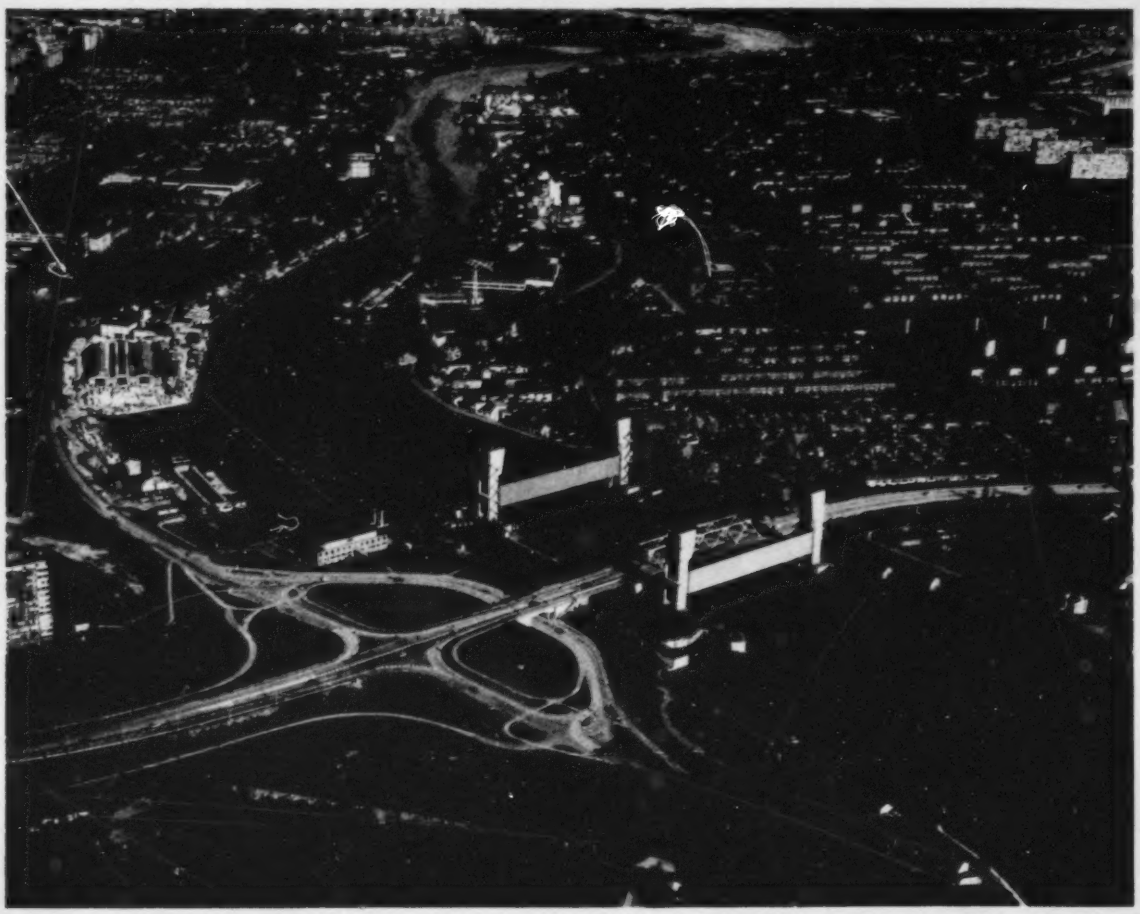

Photo XII – The storm surge barrage in the Holland IJssel, looking N.E., with left, Capelle and right, Krimpen aan de IJssel. Between the two towers on the left, the newly hung second gate.

3. Physical Planning

Urbanisation and Randstad

Further progress was made during the past year in the publication of the different parts of the Third Report on Physical Planning. Reference was made in the last Bulletin to the publication, at the beginning of 1976, of the Urbanisation Report, which forms Part 2 of the Third Report. During the course of 1976 this was criticised from many sides and a collection of these comments has been published as Part 2b. Part 2c was the report of the Raad van Advies voor de Ruimtelijke Ordening (Advisory Council for Physical Planning). This was followed by a definitive version of the Urbanisation Report (Part 2d), published in February 1977. That the participation procedure, to which all parts of the Report are subject, is no formality, is shown by the not inconsiderable differences between the original and definitive versions of the Urbanisation Report.

The original version assumed that the overspill population from the northern and southern wings of the Randstad would have to be accommodated in the provinces of North Holland (N. of the North Sea Canal) and North Brabant (western part), respectively, as well as in the Southern Lake IJssel polders; in other words, growth would take place outwards. Without abandoning this idea it has now been concluded that this would give rise to considerably increased average commuting distances, especially since firms in the secondary and services sectors moving from the larger cities migrate mainly "inwards", i.e. towards the "Green Heart" of the Randstad.

So that distances between home and work do not increase more than is necessary, the definitive version of the Urbanisation Report makes an appeal for more housing development in the great cities themselves and in the adjoining fringe areas of the "Green Heart". These ideas are also intended to allay the fears expressed by many critics that too much dispersion would weaken the Randstad socially, economically and culturally.

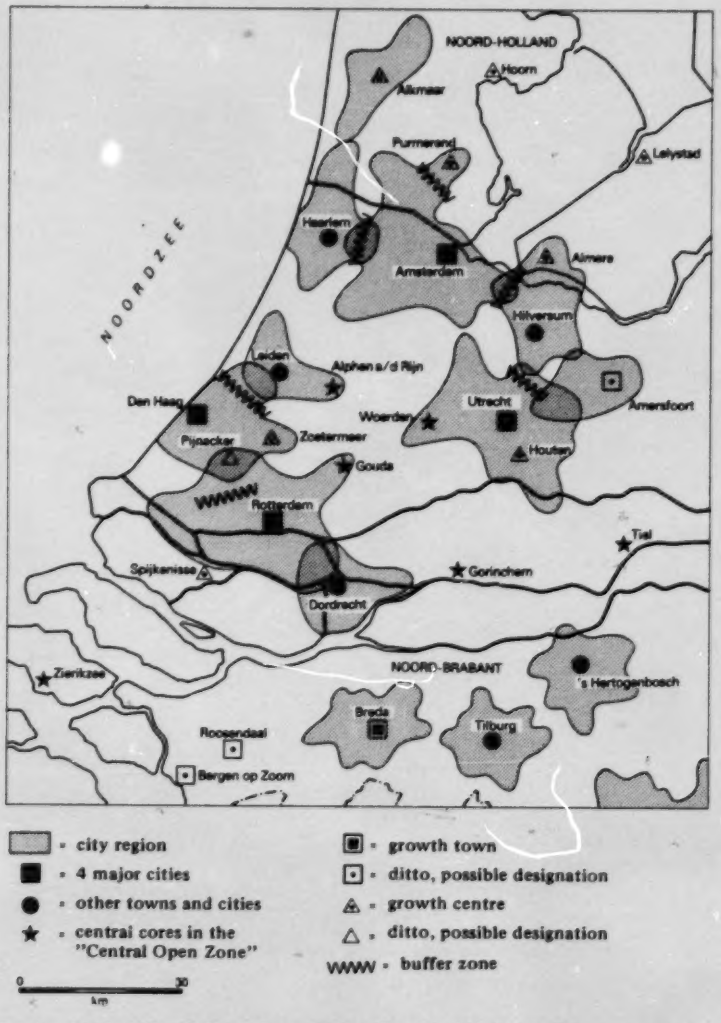

fig. 11 – Physical Planning in the West Holland Conurbation (Randstad Holland) and surrounding areas (after "Urbanisation Report").

It should not be deduced from the above that the "Green Heart principle" has been completely abandoned, only that in a number of places, such as Pijnacker/Nootdorp (N. of Rotterdam) and Amstelveen and Haarlemmermeer-Noord (S. of Amsterdam), concessions will have to be made (fig. 11).
The area around the first-named places, situated on the "Hofplein Line" between Rotterdam and The Hague, is now no longer designated as "Central Open Zone". Within the "Green Heart" of the Randstad, which forms part of the Central Open Zone, the regional housing need will largely be met in the urban centres of Gouda, Alphen aan de Rijn, Woerden and Gorinchem.

Within the city regions of the Randstad buffer zones are intended to prevent the coalescence of the individual cities. According to the definitive Urbanisation Report the diversion of growth to areas outside the Randstad is desirable only if employment moves with the population.

Rural Areas

There also appeared at the beginning of 1977 the first version of Part 3 of the Third Report on Physical Planning: the Nota Landelijke Gebieden (Rural Areas Report). Space is scarce in the Netherlands and a choice has often to be made between different use alternatives.
In order to give some guidance in this the Report presents a system of landscape zoning. It classifies five types of landscape: predominantly rural areas, predominantly wild areas, urban areas and two mixed types, where agriculture, natural landscape and recreation can coexist (fig. 12).

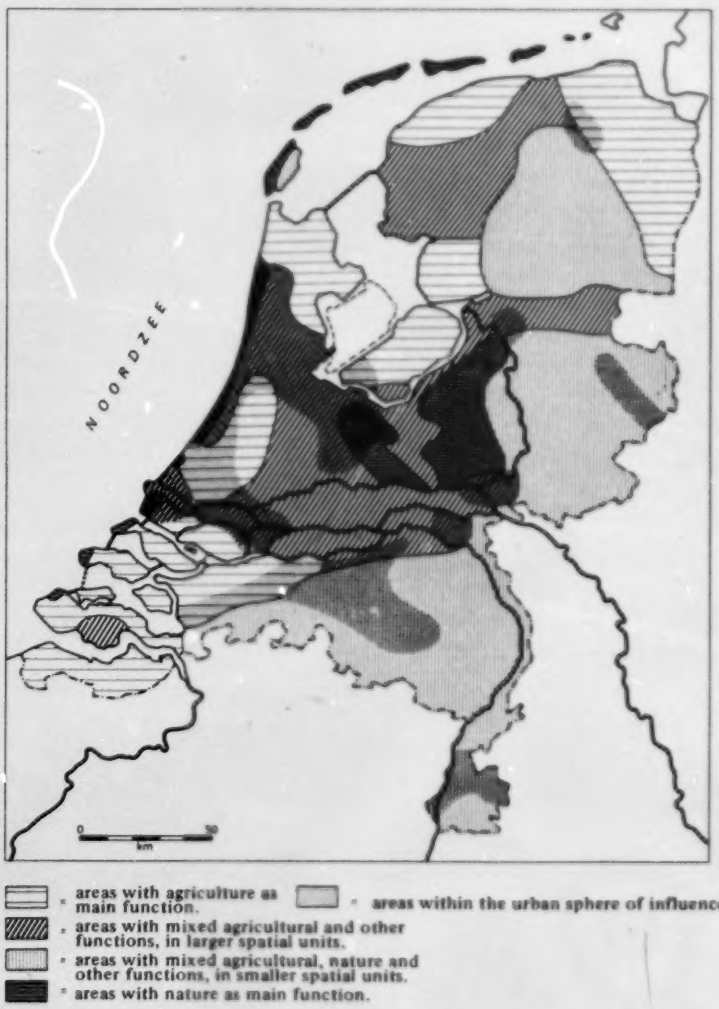
NOORDZEE
0
50
km
areas with agriculture as main function.
areas with mixed agricultural and other functions, in larger spatial units.
areas with mixed agricultural, nature and other functions, in smaller spatial units.
areas with nature as main function.
areas within the urban sphere of influence.

fig. 12 – Division into five categories of rural area (after "Rural Areas Report").

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One problem in this connection is that physical planning has so far been restricted mainly to urban areas and urban problems. The appropriate legal and administrative apparatus for a responsible and effective planning of the "open zones" is mostly lacking, as is the scientific background. This Report, too, will be subject to the complete participation procedure, so that the definitive version can be expected in about a year. Obviously the National Landscape Parks, which are a completely new idea for the Netherlands, are also discussed in the Report (see, *inter alia*, IDG Bulletin, 1975-76, pp. 19 and 20). These have given rise to much argument during the past year.
The farmers in the suggested pilot areas have protested vehemently at the new task (actually only partly new) to be imposed upon them. Clearly, the realisation of the national landscape parks is entirely dependent upon the collaboration of the farmers.

4. Environment

For many years now concern for the environment and the combatting of the constantly growing environmental pollution have received serious attention in the Netherlands. The Netherlands does not, of course, differ in this from many other countries, but there are a few geographical aspects of this problem which are specific to that country, for example:

- because of the situation on the sea and the low level of the land, there is serious danger of the soil becoming saline.
- because of its situation on the *lower reaches* of several West European rivers, pollution of the surface waters plays a more important part in the Netherlands than in many other countries.
- because of the high population density, the high degree of industrialisation and the intensive methods of farming, there is also a high intensity of pollution.
- because of the strong tendency of basic industries to locate themselves on the coast, particularly the west coast, and the predominantly south-westerly winds, many Dutch residential areas (notably in the Randstad) suffer more from air pollution than do, for example, towns in countries with winds which blow predominantly from off the land.

It has been said that the care which is devoted to nature and the environment is inversely proportional to the level of economic prosperity. This would mean that the environment is now receiving less attention because of the present economic difficulties. Without positively endorsing this proposition, one can point to a few illustrative instances where economic and environmental interests were weighed against each other.

1. During the past year there has been an exhaustive discussion about a proposal to build an iron ore pellets plant in the Rijnmond (Rotterdam-Europort) area. A few years ago the idea was abandoned of building an iron and steel works on the Maasvlakte both on environmental grounds and to meet objections in relation to commuting and the labour market. Under the Selective Investment Scheme for the Western Netherlands it was necessary to obtain a licence for the realisation of the West German (Kruwal) plans to build an iron ore pellets plant in the Rijnmond area. This was granted by the government in The Hague. The factory, with employment for nearly 200 men, would have processed imported iron ore for three West German iron and steel plants. The executive of the Rijnmond Authority was opposed to the building of the plant because of the expected damage to the environment and the relatively small economic significance of the concern to the region. The province of South Holland shared this viewpoint and refused to grant a licence. The Ministers of Economic Affairs and Social Affairs appealed against this decision, but rapidly withdrew their appeal when Kruwal announced that it had finally abandoned its proposal.

2. Another conflict where a final decision has not yet been taken concerns a new concession for quarrying marl for the use of the Eerste Nederlandse Cement Industrie (ENCI) in South Limburg. As stated on p. 13 (see photograph V) the St. Pietersberg, situated on the left bank of the Meuse south of Maastricht, has been largely quarried away to supply this industry. The ENCI has now let its eye fall on a new area of exploitation, the plateau of Margraten in the "mergelland" (mergel = marl) of South Limburg. Seeing that this is one of the most beautiful of the Dutch landscapes, it is quite understandable that a storm of protest has arisen.
   The ENCI has countered with the argument that, if the concession is not granted, the works will have to close in about 1990, with the loss of 1,300 jobs in an area that has already greatly suffered from the closing of the coal mines.

Besides these conflicts the question of the *pollution of the Rhine* was again the centre of attention during the past year. There was satisfaction at the coming into force of a number of concrete international decisions after years of *talk* about the pollution of the Rhine and how to combat it.

In April 1976 the riparian Rhine states agreed in Paris to a draft treaty for reducing chemical pollution, while in May 1976, the first agreement was signed in Berne relating to the reduction of the salt discharges from the potash mines in Alsace. These concerns will gradually begin to store part of their waste underground. The costs will be shared between all the riparian Rhine states (Netherlands share: 34%). This runs counter to the principle embodied in Dutch pollution legislation of "the polluter pays". In December 1976 both treaties were signed, but at the same time many sceptical voices were heard about their effect. It is clear in any event that progress will have to be made by stealth.

That little improvement can be expected in the short term is perhaps best illustrated by a headline from a Dutch newspaper of 15th March 1977: "Rhine bears more salt than ever into our country". The accompanying report stated that, during the month of February 1977, the Rhine transported an average of 500 kg. of salt per second into the Netherlands; the average for 1976 was 280 kg. per second. The market gardeners of the Westland, in particular, suffer greatly from this salination and legal proceedings have been instituted in the name of some of them against the French potash mines. The European court in Luxembourg declared that the Dutch judge was competent to deal with the case.

5. Excursions

For the benefit of readers of this Bulletin who are considering visiting the Netherlands in the near future, there follow a few items of information to supplement that contained in the IDG guides to the South-West Netherlands and the Lake IJssel region.

- the opening of the road along the dike from Lelystad to Enkhuizen (fig. 9) makes it easier to include a visit to Enkhuizen in an excursion to the Lake IJssel polders. (Enkhuizen is the home of the Zuyder Zee Museum; see IDG Zuyder Zee/Lake IJssel Guide, p. 55).

- the exhibition at Lelystad-Haven of the Zuyder Zee works, referred to in the latter guide, has been closed. In its place, a permanent exhibition building called "Het Nieuwe Land" (The New Land) has been opened a little farther to the north-east, close to the Houtrib Locks. The centre is open daily from 10 a.m. to 5 p.m., admission price one guilder per head. Applications for conducted tours: tel. 03200-27799. The centre has ample parking space and a self-service restaurant (3 on fig. 9).

- as already announced in the Guide to the South-West Netherlands (p. 36), the Eur-o-Rama Information Centre in the Europort area has been closed. The Delta Expo by the Haringvliet Dam, on the other hand, has been completely renewed in the past few years and is well worth a visit (IDG Guide to the South-West Netherlands, p. 38).

- the "Sociale Geografie voor Onderwijs en Informatie-overdracht" (Human Geography for Education and Information Transmission) section of the Geographical Institute at Utrecht, in collaboration with the Government Service for Land and Water Use of the Ministry of Agriculture and Fisheries, has developed and produced a documentation set about the region of the great rivers. Like the Zuyder Zee and Delta regions, the region of the great rivers may be regarded as typically Dutch, although it is much less well-known. For several decades a large-scale rural replanning project has been in progress here, involving farm consolidation, improvement of soils and water economy, building of new roads, farms etc. The documentation comprises an introduction in the form of a set of colour slides and printed information, including the description of excursion routes. The documentation set will be obtainable in the late summer of 1977 from the Nederlands Instituut voor Audio-visuele Media, Sweelinckplein 33, The Hague. Shortly afterwards an adapted English-language version will be published.

IV – THE INFORMATION AND DOCUMENTATION CENTRE FOR THE GEOGRAPHY OF THE NETHERLANDS

Annual Report 1976

The number of requests for information or documentation material received during 1976 was again larger than in the preceding year. This time, 658 letters were received from 36 countries. The highest proportion of requests again came from neighbouring countries, such as West Germany (33%), Belgium (24%) and the United Kingdom (9%).

In the series of informational publications produced by the IDG in collaboration with the Ministry of Foreign Affairs, the following appeared in 1976:

- "Compact Geography of the Netherlands", Japanese and Russian editions;
- Wall Map of the Netherlands, Japanese, Russian and Polish versions;
- IDG Bulletin 1975-76, in Dutch, English, French, German and, for the first time, Spanish editions.

During the reporting year preparations were almost completed for the issue of a new publication entitled "A Compact Pictorial Geography of the Netherlands", intended as a complement to the "Compact Geography of the Netherlands". It contains photographs (many of them from the air) of 14 subjects, accompanied by the appropriate map extracts and an explanatory text.
The Dutch edition appeared at the beginning of 1977; English, French, German and Danish editions will follow during the course of this year and Spanish, Portuguese, Italian, Polish, Japanese and Indonesian editions in 1978.

The IDG presented an exhibition at the Congress of the International Geographical Union, held in Moscow from 26 July to 4 August 1976. It was submitted within the context of the section "Education in Geography, Geographical Literature and Dissemination of Geographical Knowledge". The exhibition, which attracted great interest and won much praise, had as its theme "The Randstad Holland" and was provided with a methodological commentary. The IDG received much co-operation in designing, mounting and transporting the exhibition from, among others, the Geographical Institute of the State University of Utrecht, the Ministries of Education and Sciences and and of Foreign Affairs, the National Information Service and the Netherlands Embassy in Moscow.
During the Congress more than 1,000 copies of the "Compact Geography of the Netherlands", specially translated into Russian for the occasion, and of a Russian version of the Wall Map of the Netherlands were given to participants from the Soviet Union and other East European countries.

At the end of August 1976 a Netherlands-Belgian conference concerned with the correction of Dutch language school geography textbooks etc. was held in Utrecht. It was one of the series of bilateral meetings being organised by the Netherlands with neighbouring countries, aimed at achieving a mutual improvement of the teaching of the geography of the countries concerned (in 1973 a meeting took place in Brunswick with the Federal German Republic, and in 1975 the IDG invited a number of British geographers to Utrecht). In preparation for the conference the two countries had exchanged a number of textbooks and other teaching aids. Reports on the way each country's geography was depicted in the other country's material were presented and discussed at the conference.

There was much criticism from both sides, both in respect of inaccurate or out-of-date information and in relation to more fundamental matters, such as the choiche of themes or regions and the method of approach. The Belgian participants were unpleasantly surprised to discover that the adoption of modern, thematic methods, instead of the regional-descriptive approach, can result in little or no attention being given to a neighbour country.
A detailed Final Report was drawn up of the conference (with a summary in English).

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Aims and activities

For those readers who are making their first acquintance with the IDG through this Bulletin there follows, lastly, a summary of the IDG's origins, aims and activities.
The Information and Documentation Centre for the Geography of the Netherlands is a non-profit making body, whose aim is to supply information and documentation about the geography of the Netherlands to institutions and bodies outside the Netherlands concerned with eduction, study and information, in the widest sense, about that country.

The Centre tries to achieve its aims by:
- the establishment and maintenance of a bureau charged with carrying out its activities and established in the Geographical Institute of the State University at Utrecht.
- the answering of questions about the geography of the Netherlands.
- the provision of literature lists.
- tracing and negotiating for the acquisition of written and illustrated documentation material.
- the provision of addresses.
- the collection of foreign books and articles about the Netherlands (in foreign languages).
- the encouragement of the production of written and illustrated publications in foreign languages to help create a correct picture of the Netherlands.
- the critical study of foreign written and illustrated publications about the Netherlands and the making of comments, where necessary.

The idea of establishing such centres originated from a conference on the revision of school geography books held in Ireland in 1963 under the auspices of the Council of Europe. The Centre has been functioning since 21st September 1964. Activities had to begin under the pressure of circumstances (a parliamentary question concerning less-than-correct statements about the Netherlands in a foreign geography book) before a definitive form of organisation had been found. On 9th December 1969 the Centre assumed the legal status of a Foundation and its bureau began to function regularly on 1st April 1971.

The work done so far can be divided into a number of categories:
- replying to letters from all parts of the World. The letters contain a great variety of requests for information about the geography of the Netherlands, as well as for the supply of visual material, for addresses or assistance in the preparation of field excursions.
- the reception of foreign geographers preparing, for example, a publication about the geography of the Netherlands or a field excursion.
- the compilation of information in different languages (brochures, guides, wall map, bulletin; see page 37), in collaboration with the Ministry of Foreign Affairs.
- the compilation of a bibliography of foreign-language publications, principally published since 1945, about the geography of the Netherlands. Lists have been compiled for distribution of the titles in the English, French and German languages contained in the bibliography. There is also a list of literature in the Dutch language. In addition a summary has been made of all the visual material (maps, photographs, films etc) illustrating the geography of the Netherlands.
- the organisation of bilateral conferences on the mutual revision of geography teaching material.
- attempting to publicise the Centre's existence and mode of operation among as wide as possible a circle of foreign geographers.

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6 – Communications
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